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Weed Management In Horticultural Crops

Research Results
2011

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Tim Koch

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The Ohio State University
Ohio Agricultural Research and Development Center
Ohio State Extension

This report contains the results of research on horticultural crop weed management in Ohio for 2011. This report and other resources are available on the Internet at: **www.oardc.ohio-state.edu/weedworkshop**

This bulletin does not constitute endorsement or specific recommendations. Apology is expressed for any inadvertent errors found in this report.

Final copies of commercial advertisement that will contain data from these results are subject to the author's approval before publication.

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LIST OF CROP BAYER CODES USED IN THIS REPORT:

AGRASS* = Annual Grasses
ALLCE = Green Onion
BRSOA = Kale
BRSOB = Cauliflower
BRSOK = Broccoli
CYPSAN = Bell Pepper
LACSA = Lettuce
LYPES = Tomato
MABSD = Apple
RUBID = Red Raspberry
RUBOC = Black Raspberry
RUBSG = Brambles; (raspberries and blackberries)
VACMY = Blackberry
ZEAMX = Sweet Corn

* not official Bayer Code.

LIST OF ABBREVIATIONS AND DEFINITIONS USED IN THIS REPORT:

AVE = Average
BURN = Necrotic tissue
CHLOROSIS = Yellow coloration or bleaching of foliage
CM = Centimeter
CONTROL = Herbicide efficacy
DAT= Days after treatment
DOR = Dormant
DIAM = Diameter
GROWTH = Annual increase in length of shoot
INJURY = Composite assessment of stunting, chlorosis, and other visible effects
MKTB = Marketable fruit
MOSAT = Months after treatment
MSP = Mid-spring
NO = Number
OZ = Ounces
POST = Post emergent application
POSTTP = Post-transplant
PRE = Pre emergent application
PRETP = Pre-transplant
RACOBL = Randomized Complete Block Design
STEM TWIST = Distorted main stem caused by herbicide injury
STUNT = Reduction in height or growth
UNMKTB = Unmarketable fruit; green (tomatoes), diseased or cull
VEGETAT = Vegetative
WAFLUT = Weeks after flowering of the untreated control
WAT = Weeks after treatment

METHODS OF ASSESSING CROP INJURY, WEED CONTROL, AND DENSITY:

Unless otherwise stated, crop injury and weed control were assessed visually. The 0-100 linear scale was used, in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

For weed density: LOW = Scattered, just a few weeds
MEDIUM = 1 weed per 3 feet of row
HIGH = More than 1 weed per 3 feet of row

LIST OF WEEDS WITH BAYER CODES USED IN THIS REPORT:

BAYER CODE	COMMON NAME	BOTANICAL NAME
ABUTH	velvetleaf	*Abutilon theophrasti* Medicus
ACCVI	Virginia copperleaf	*Acalypha virginica* L.
AGRASS*	foxtail, crabgrass spp.	*Setaria, Digitaria* spp.
AGGRE	quackgrass	*Elytrigia repens* (L.) Nevski
AMABL	prostrate pigweed	*Amaranthus blitoides S. Wats.*
AMARE	redroot pigweed	*Amaranthus retroflexus* L.
AMAXX	pigweed spp.	*Amaranthus* spp.
AMBEL	common ragweed	*Ambrosia artemisiifolia* L.
AMBTR	giant ragweed	*Ambrosia trifida L.*
CAGSE	hedge bindweed	*Calystegia sepium* (L.) R. Br.
CAPBP	shepherd's purse	*Capsella bursa-pastoris* (L.) Medicus
CARHI	hairy bittercress	*Cardamine pratensis* L.
CERVU	mouseear chickweed	*Cerastium vulgatum* L.
CHEAL	common lambsquarters	*Chenopodium album* L.
CIRAR	Canada thistle	*Cirsium arvense* (L.) Scop.
CYAOV	Shagbark hickory	*Carya ovata (MILL) K.KOCH*
CYPES	yellow nutsedge	*Cyperus esculentes* L.
DACGL	orchardgrass	*Dactylis glomerata* L.
DAUCA	wild carrot	*Daucus carota* L.
DIGSA	large crabgrass	*Digitaria sanguinalis* (L.) Scop.
GLEHE	ground ivy	*Glechoma hederacea* L.
MALNE	common mallow	*Malva neglecta* Wallr.
OXAST	yellow woodsorrel	*Oxalis stricta* L.
PANDI	fall panicum	*Panicum dichotomiflorum* Michx.
PLALA	buckhorn plantain	*Plantago lanceolata* L.
PLAMA	broadleaf plantain	*Plantago major* L.
POANN	annual bluegrass	*Poa annua* L.
POLPY	Pennsylvania smartweed	*Polygonum pensylvanicum* L.
POROL	common purslane	*Portulaca oleracea* L.
PRTQU	Virginia creeper	*Parthenocissus quinquifolia*(L.) Planch.
RORIS	marsh yellowcress	*Rorippa islandica L.*

RUBFR	bramble	*Rubus fruticosis* L.
RUMOB	broadleaf dock	*Rumex obtusifolius* L.
SETFA	giant foxtail	*Setaria faberii* L.
SENVU	common groundsel	*Senecio vularis* L.
SOLPT	Eastern black nightshade	*Solanum ptycanthum* Dun.
SOOCA	Canada goldenrod	*Solidago canadensis* L.
STEME	common chickweed	*Stellaria media* (L.) Vill
TAROF	dandelion	*Taraxacum officinale* Weber in Wiggers
TOXRA	poison ivy	*Toxicodendron* radicans (L.) Ktze.
TRFPR	red clover	*Trifolium pratense* L.
TRFRE	white clover	*Trifolium repens* L.

* not official Bayer Code.

HERBICIDE LIST

TRADE NAME	COMMON NAME	FORMULATION	MANUFACTURER
Accent Q	nicosulfuron	54.5 WDG	DuPont Crop Protection
Arsenal	Isopropylamine salt of imazapyr	28.7 EC	BASF Ag Products
Atrazine	atrazine	4L	Syngenta Crop Protection, Inc.
Bicep 11 Magnum	s-metolachlor+ atrazine + safener	5.5L	Syngenta Crop Protection, Inc.
Chateau	flumioxazin	51 WDG	Valent U.S.A. Corp. Agr. Products
Clarity	dicamba	4L	BASF Ag Products
Command	clomozone	3L	FMC
Degree Extra	acetochlor+ atrazine + safener	4L	Monsanto Company
Drive	quinclorac	75 DF	BASF Ag Products
Dual Magnum	s-metolachlor	7.62 EC	Syngenta Crop Protection, Inc.
Dual 11 Magnum	s-metolachlor + safener	7.64 L	Syngenta Crop Protection, Inc.
Durango	glyphosate	4 SL	Dow AgroSciences LLC
Escort	metsulfuron methyl	60WG	DuPont Crop Protection
Garlon	triclopyr	4EC	Dow AgroSciences LLC
Goaltender	oxyfluoren	4 L	Dow AgroSciences LLC
Guardsman Max	Dimethenqamid-P+ atrazine	5 L	BASF Ag Products
Impact	topramezone	2.8 L	AMVAC
Indaziflan	indaziflan	200 SC	Bayer CropScience
Karmex	diuron	80 DF	Griffin LLC
Kerb	pronamide	50 WP	Dow AgroSciences LLC
Krenite S	fosamine ammonium	4L	DuPont Crop Protection
Laudis	tembotrione	3.5L	Bayer CropScience
Lorox	linuron	50 WP	Tessenderlo Kerley, Inc.
Lumax	s-metolachlor+ atrazine + mesotrione	4L	Syngenta Crop Protection, Inc.
MAT-28	N/A	50 SG	DuPont Crop Protection
Matrix	rimsulfuron	25 DF	DuPont Crop Protection
Milestone	aminopyralid	2L	Dow AgroSciences LLC
Nortron	ethofumesate	4L	Bayer CropScience
Option	foramsulfuron	35% WDG	Bayer CropScience
Outlook	dimethenamid	6 L	BASF Ag Products
Prowl H_2O	pendimethalin	3.8 L	BASF Ag Products
Pruvin	rimsulfuron	25DF	MANA
Reflex	fomesafen	2L	Syngenta Crop Protection, Inc.
Rely	glufosinate ammonium	200 SL	Bayer CropScience
Roundup W/M	glyphosate	4.5 L	Monsanto Company
Sandea	halosulfuron-methyl	75 DF	Gowan Company
Select	clethodim	2 L	Valent U.S.A. Corp. Agr. Products
Sencor	metribuzin	75 DF	Bayer CropScience
Sinbar	terbacil	80 WP	Tessenderlo Kerley, Inc.
Spartan	sulfentrazone	75 DF	FMC Corporation
Starane Ultra	fluroxypyr	2.8 L	Dow AgroSciences LLC
Stinger	clopyralid	3 L	Dow AgroSciences LLC
Strategy	ethalfluralin+clomozone	2.1 L	Loveland Products, Inc.
Surflan	oryzalin	4L	Dow AgroSciences LLC
Treevix	saflufenacil	70 WG	BASF Ag Products
Weedar 64	2, 4 -D amine	3.8L	NuFarm

ADJUVANT LIST

NAME	ABBREVIATION	DESCRIPTION
Ammonium sulfate	AMS	Spray grade fertilizer
Crop Oil Concentrate	COC	Paraffin base petroleum oil
Induce	NIS	Nonionic surfactant
MSO	MSO	Methylated seed oil
28% N	UAN	Urea ammonia nitrate

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC - Muck Crops Agricultural Research Station, Willard, Ohio 44890
Huron County, Latitude: 41° 01' N; Longitude: 82° 44' W.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	51.1	78.4	5/1/10	0.07	63.2	72.9	6/1/10	0	63.2	79.3	7/1/10	0	50.7	73.1	8/1/10	0	59.7	84.6
4/2/10	0	57.8	82.4	5/2/10	0.14	62.1	72.3	6/2/10	0.05	60.5	82.1	7/2/10	0	46.6	78.5	8/2/10	0	59.7	87.4
4/3/10	0	46.6	77.8	5/3/10	0.12	55.6	73.8	6/3/10	0	63.9	81.6	7/3/10	0	52.7	85.7	8/3/10	0.25	69.4	81.4
4/4/10	0	35.7	71.3	5/4/10	0	53.7	73.0	6/4/10	0.06	60.5	78.8	7/4/10	0	59.0	90.7	8/4/10	0.38	70.5	85.6
4/5/10	0.15	55.3	75.7	5/5/10	0.19	54.4	83.8	6/5/10	0.89	66.7	77.7	7/5/10	0	70.5	92.4	8/5/10	0.36	66.5	85.2
4/6/10	0	61.4	82.9	5/6/10	0.13	551.2	67.9	6/6/10	0.04	59.5	76.0	7/6/10	0	67.3	91.9	8/6/10	0.01	59.8	78.8
4/7/10	0.01	57.7	73.8	5/7/10	0.27	48.2	83.4	6/7/10	0.01	53.0	69.2	7/7/10	0	63.4	91.6	8/7/10	0	56.2	80.2
4/8/10	0.43	38.5	60.4	5/8/10	0.01	40.8	60.5	6/8/10	0.13	45.8	71.0	7/8/10	0.21	66.9	94.2	8/8/10	0	60.6	84.3
4/9/10	0	35.1	47.1	5/9/10	0	35.1	54.8	6/9/10	0.52	57.0	78.6	7/9/10	0.51	63.6	78.0	8/9/10	0	63.8	88.3
4/10/10	0	28.0	65.4	5/10/10	0	30.5	59.5	6/10/10	0	59.7	79.2	7/10/10	0	57.4	84.8	8/10/10	0	68.9	88.7
4/11/10	0	42.2	65.0	5/11/10	0.89	42.3	67.5	6/11/10	0.04	60.6	81.8	7/11/10	0	61.6	86.1	8/11/10	0	68.4	86.6
4/12/10	0	37.0	64.2	5/12/10	0.53	45.8	52.2	6/12/10	0.18	69.9	85.5	7/12/10	0.02	66.7	85.1	8/12/10	0	70.5	84.3
4/13/10	0.04	41.2	56.3	5/13/10	0.01	46.1	81.8	6/13/10	0.09	66.6	79.2	7/13/10	0	65.2	80.8	8/13/10	0	65.0	88.6
4/14/10	0	39.0	69.5	5/14/10	0.10	54.8	72.7	6/14/10	0	63.8	81.2	7/14/10	0	63.5	88.4	8/14/10	0.04	71.5	91.4
4/15/10	0	46.6	83.3	5/15/10	0	44.0	68.6	6/15/10	0.21	66.6	80.3	7/15/10	0	64.3	89.3	8/15/10	0.25	70.0	88.7
4/16/10	0	49.2	75.5	5/16/10	0	51.4	63.9	6/16/10	0	64.8	81.4	7/16/10	0.04	70.1	87.2	8/16/10	0	61.0	81.2
4/17/10	0	36.2	50.4	5/17/10	0.53	52.2	57.2	6/17/10	0	59.1	75.3	7/17/10	0	65.6	90.8	8/17/10	0	56.9	81.1
4/18/10	0	32.8	51.1	5/18/10	0.04	53.8	62.7	6/18/10	0	53.2	86.6	7/18/10	0.25	63.4	89.1	8/18/10	0	63.3	83.7
4/19/10	0	26.9	62.1	5/19/10	0	48.7	67.4	6/19/10	0	67.7	88.8	7/19/10	0.01	68.6	84.5	8/19/10	0	60.0	86.8
4/20/10	0	30.0	62.7	5/20/10	0	44.3	78.9	6/20/10	0	60.8	84.7	7/20/10	0.19	69.4	81.2	8/20/10	0	61.7	89.7
4/21/10	0	29.9	69.0	5/21/10	0.15	59.0	73.3	6/21/10	0	60.0	85.7	7/21/10	0	66.1	87.9	8/21/10	1.06	67.6	80.1
4/22/10	0	38.6	57.0	5/22/10	0.01	62.7	74.2	6/22/10	0	69.1	89.2	7/22/10	0	61.6	88.5	8/22/10	0.01	64.3	78.8
4/23/10	0	33.4	67.5	5/23/10	0	54.5	82.7	6/23/10	1.26	66.2	91.8	7/23/10	0.79	72.0	93.5	8/23/10	0	63.1	77.2
4/24/10	0.35	48.4	67.2	5/24/10	0	59.9	83.3	6/24/10	0.13	63.9	80.0	7/24/10	0.58	71.3	90.5	8/24/10	0.01	56.5	76.5
4/25/10	1.74	54.9	70.0	5/25/10	0	61.3	85.5	6/25/10	0	60.5	82.9	7/25/10	0.08	63.0	77.8	8/25/10	0	59.5	80.2
4/26/10	0.18	44.8	56.6	5/26/10	0	60.2	86.8	6/26/10	0	61.3	88.5	7/26/10	0	56.0	81.9	8/26/10	0	51.6	73.9
4/27/10	0	34.9	48.7	5/27/10	0	59.3	90.0	6/27/10	1.71	68.6	92.6	7/27/10	0	58.0	85.0	8/27/10	0.13	45.8	78.2
4/28/10	0	30.4	57.4	5/28/10	0.08	64.5	85.1	6/28/10	1.07	66.3	82.8	7/28/10	0.63	65.4	88.9	8/28/10	0	48.0	83.6
4/29/10	0	36.1	67.6	5/29/10	0	58.4	82.8	6/29/10	0	56.7	72.0	7/29/10	0	61.6	77.9	8/29/10	0	53.0	91.9
4/30/10	0	56.1	82.5	5/30/10	0	53.9	89.0	6/30/10	0	51.3	71.8	7/30/10	0	57.3	80.7	8/30/10	0.19	63.2	90.8
				5/31/10	1.75	65.7	85.1					7/31/10	0	65.4	78.8	8/31/10	0	65.0	90.0

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC – North Central Agricultural Research Station, Fremont, Ohio 43420
Sandusky County, Latitude: 41° 21' N; Longitude: 83° 07' W; Elevation: 636 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	55.5	80.8	5/1/10	0.07	64.1	74.6	6/1/10	0.01	64.9	81.6	7/1/10	0	53.9	72.5	8/1/10	0	61.8	82.5
4/2/10	0	58.7	83.5	5/2/10	0.19	63.2	74.2	6/2/10	0.04	62.5	80.4	7/2/10	0	50.7	80.0	8/2/10	0	58.4	89.0
4/3/10	0	46.8	78.0	5/3/10	0.25	56.6	74.6	6/3/10	0	62.7	82.0	7/3/10	0	56.5	86.5	8/3/10	0	70.6	83.5
4/4/10	0.01	36.8	73.2	5/4/10	0	54.1	73.2	6/4/10	0	61.2	85.7	7/4/10	0	63.8	91.6	8/4/10	0.44	70.6	87.5
4/5/10	0	58.0	77.4	5/5/10	0.01	57.8	83.0	6/5/10	0.08	68.5	78.8	7/5/10	0	72.9	92.3	8/5/10	0.01	69.3	86.9
4/6/10	0	61.5	85.8	5/6/10	0.02	50.3	68.3	6/6/10	0.17	60.5	77.6	7/6/10	0	68.4	92.3	8/6/10	0	60.9	81.7
4/7/10	0.66	56.8	74.3	5/7/10	0.38	48.6	83.1	6/7/10	0	57.2	71.8	7/7/10	0	66.2	94.3	8/7/10	0	56.8	82.3
4/8/10	0.47	38.6	58.4	5/8/10	0	42.1	58.6	6/8/10	0.33	50.3	73.7	7/8/10	0.18	69.9	94.0	8/8/10	0	63.5	86.2
4/9/10	0	34.5	49.2	5/9/10	0	36.0	55.9	6/9/10	0.26	58.1	80.1	7/9/10	0.06	66.4	81.1	8/9/10	0	65.9	89.6
4/10/10	0	29.3	68.0	5/10/10	0	33.8	55.3	6/10/10	0	60.6	79.9	7/10/10	0.01	61.9	87.4	8/10/10	0	68.2	88.4
4/11/10	0	43.8	64.8	5/11/10	0.73	42.9	65.9	6/11/10	0.06	62.0	83.9	7/11/10	0	63.7	88.3	8/11/10	1.00	68.3	84.5
4/12/10	0	35.2	60.2	5/12/10	0.14	47.2	51.4	6/12/10	0.41	71.9	88.1	7/12/10	0	70.5	86.5	8/12/10	0	67.9	84.9
4/13/10	0.08	43.9	55.4	5/13/10	0.07	45.9	83.2	6/13/10	0.01	67.5	80.0	7/13/10	0	66.4	82.1	8/13/10	0	66.8	87.7
4/14/10	0	40.6	70.8	5/14/10	0.85	56.4	70.2	6/14/10	0.18	65.7	81.6	7/14/10	0.01	65.5	86.5	8/14/10	0.14	69.5	86.8
4/15/10	0	47.9	83.9	5/15/10	0	47.8	68.5	6/15/10	0.05	67.6	77.7	7/15/10	0	66.9	91.8	8/15/10	0.48	70.0	90.5
4/16/10	0.03	49.8	70.3	5/16/10	0	53.0	60.7	6/16/10	0	67.6	82.4	7/16/10	0.30	72.0	87.3	8/16/10	0	60.5	81.9
4/17/10	0	37.7	50.7	5/17/10	1.28	53.7	57.8	6/17/10	0	60.1	75.3	7/17/10	0	66.8	91.9	8/17/10	0	58.1	82.1
4/18/10	0	32.3	51.4	5/18/10	0.05	52.1	58.9	6/18/10	0.06	56.1	88.7	7/18/10	0.25	64.9	899	8/18/10	0	64.0	82.0
4/19/10	0	32.5	60.3	5/19/10	0	52.1	66.2	6/19/10	0	66.5	88.1	7/19/10	0	69.8	83.9	8/19/10	0	61.0	87.3
4/20/10	0	34.4	62.2	5/20/10	0	46.5	81.1	6/20/10	0	63.0	84.3	7/20/10	0	69.4	83.9	8/20/10	0	64.1	89.6
4/21/10	0	35.2	70.3	5/21/10	0.43	60.5	74.8	6/21/10	0	63.1	86.1	7/21/10	0	67.6	90.9	8/21/10	0.45	67.8	77.1
4/22/10	0	40.5	54.0	5/22/10	0	62.6	76.3	6/22/10	0.01	71.0	89.6	7/22/10	0.02	62.2	88.5	8/22/10	0	63.5	77.2
4/23/10	0	39.5	61.9	5/23/10	0	56.6	84.9	6/23/10	0.68	66.8	90.9	7/23/10	0.65	71.5	96.7	8/23/10	0	63.4	76.6
4/24/10	0.71	49.1	66.5	5/24/10	0	59.3	83.1	6/24/10	0.04	67.6	81.3	7/24/10	0.13	71.6	93.2	8/24/10	0	61.5	77.5
4/25/10	1.10	48.7	67.1	5/25/10	0	60.7	85.3	6/25/10	0	63.8	83.2	7/25/10	0.12	65.3	80.4	8/25/10	0	63.7	80.2
4/26/10	0.31	46.4	61.0	5/26/10	0	62.2	85.7	6/26/09	0	63.2	88.9	7/26/10	0	59.4	83.3	8/26/10	0	54.8	72.1
4/27/10	0	39.0	51.4	5/27/10	0	64.2	87.4	6/27/09	0.81	67.9	91.3	7/27/10	0	58.4	85.9	8/27/10	0	48.7	79.3
4/28/10	0	31.7	58.5	5/28/10	0.03	63.6	82.3	6/28/09	0.19	65.4	85.0	7/28/10	0	66.3	90.3	8/28/10	0	50.8	85.1
4/29/10	0	38.2	69.7	5/29/10	0	62.7	8039	6/29/09	0	60.4	73.8	7/29/10	0.01	64.0	78.5	8/29/10	0	57.9	92.2
4/30/10	0	53.8	83.0	5/30/10	0	58.0	88.8	6/30/09	0	51.8	73.3	7/30/10	0	60.3	82.4	8/30/10	0	66.0	93.5
				5/31/10	1.56	65.5	84.5					7/31/10	0	67.0	83.5	8/31/10	0	66.3	91.4

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC, Wooster, Ohio 44691

Wayne County, one mile south of Wooster; Latitude: 40° 47' N; Longitude: 81° 55' W; Elevation: 1020 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	46.5	80.0	5/1/10	0	60.7	71.5	6/1/10	0	59.9	78.7	7/1/10	0	48.0	73.3	8/1/10	0	59.7	85.9
4/2/10	0	47.6	83.9	5/2/10	0.19	60.3	72.9	6/2/10	0.74	56.6	83.6	7/2/10	0	47.0	78.9	8/2/10	0	62.2	88.2
4/3/10	0	46.7	79.1	5/3/10	0.21	56.5	73.2	6/3/10	0.29	63.3	77.9	7/3/10	0	51.1	84.1	8/3/10	0.04	69.2	79.9
4/4/10	0	37.9	71.5	5/4/10	0.01	53.7	71.3	6/4/10	0.69	61.3	77.9	7/4/10	0	56.3	88.1	8/4/10	0.10	71.6	85.7
4/5/10	0	50.6	76.5	5/5/10	0	45.1	81.4	6/5/10	1.77	65.1	76.5	7/5/10	0	65.8	90.3	8/5/10	0.42	69.0	85.1
4/6/10	0.01	58.4	82.4	5/6/10	0.12	51.8	67.0	6/6/10	0.01	59.3	76.1	7/6/10	0	67.8	90.3	8/6/10	0.01	61.3	78.9
4/7/10	0	67.8	76.0	5/7/10	0.40	42.4	81.4	6/7/10	0	49.9	68.3	7/7/10	0	64.9	90.7	8/7/10	0	57.2	81.3
4/8/10	0.06	38.7	68.4	5/8/10	0.06	42.6	62.1	6/8/10	0	45.3	71.6	7/8/10	0	64.7	91.7	8/8/10	0	58.4	84.7
4/9/10	0	34.4	44.9	5/9/10	0	35.9	53.1	6/9/10	0.97	56.3	76.9	7/9/10	1.03	65.6	78.2	8/9/10	0	61.7	87.8
4/10/10	0	26.6	63.2	5/10/10	0	30.3	59.4	6/10/10	0	58.2	78.2	7/10/10	0.01	58.2	84.9	8/10/10	0	69.7	87.9
4/11/10	0	44.1	67.1	5/11/10	0.92	42.7	65.1	6/11/10	0.01	56.5	81.8	7/11/10	0	60.7	86.4	8/11/10	0	66.7	88.9
4/12/10	0	34.3	63.9	5/12/10	0.42	48.2	57.8	6/12/10	0.16	69.6	83.2	7/12/10	0.43	66.6	82.9	8/12/10	0	71.3	87.5
4/13/10	0.03	41.7	54.3	5/13/10	0.01	45.2	81.5	6/13/10	0.31	64.3	81.9	7/13/10	0.45	66.1	81.6	8/13/10	0	67.5	89.1
4/14/10	0	39.3	65.6	5/14/10	0.01	57.0	75.5	6/14/10	0	62.7	79.6	7/14/10	0.01	64.5	85.2	8/14/10	0.65	66.8	90.8
4/15/10	0	40.2	80.2	5/15/10	0.01	44.5	69.1	6/15/10	0.15	66.3	80.3	7/15/10	0	64.1	88.7	8/15/10	0.13	71.6	86.4
4/16/10	0.14	50.2	76.5	5/16/10	0	52.1	67.5	6/16/10	0	67.8	81.1	7/16/10	0.03	71.1	85.9	8/16/10	0	62.3	79.9
4/17/10	0	38.2	50.9	5/17/10	0.38	53.8	57.1	6/17/10	0	57.9	73.5	7/17/10	0	62.9	88.7	8/17/10	0	58.1	79.9
4/18/10	0	34.2	47.2	5/18/10	0.03	53.8	59.6	6/18/10	0	53.1	84.0	7/18/10	0.12	67.4	87.7	8/18/10	0	63.1	86.5
4/19/10	0	26.0	59.1	5/19/10	0	49.0	69.8	6/19/10	0	66.1	87.2	7/19/10	0.09	68.6	85.8	8/19/10	0	59.7	86.2
4/20/10	0	31.0	63.1	5/20/10	0	44.2	80.9	6/20/10	0	62.5	82.6	7/20/10	0.03	68.5	81.5	8/20/10	0	62.6	89.5
4/21/10	0	32.4	66.6	5/21/10	0.10	53.0	73.6	6/21/10	0	59.6	86.7	7/21/10	0	68.1	86.2	8/21/10	0.63	66.0	83.4
4/22/10	0	39.7	63.9	5/22/10	0.42	59.9	73.6	6/22/10	0.12	68.8	86.7	7/22/10	0.16	64.9	86.7	8/22/10	0.05	65.4	80.1
4/23/10	0	33.2	67.4	5/23/10	0.02	55.6	82.2	6/23/10	0.99	67.2	89.1	7/23/10	0.01	75.9	91.8	8/23/10	0.01	63.3	76.7
4/24/10	0.28	47.0	64.0	5/24/10	0	58.4	80.8	6/24/10	0.09	62.8	79.2	7/24/10	2.39	71.2	90.8	8/24/10	0	60.6	74.7
4/25/10	1.08	53.6	71.4	5/25/10	0	58.2	84.0	6/25/10	0	60.2	82.9	7/25/10	0.12	63.0	79.4	8/25/10	0.22	60.5	78.6
4/26/10	0.13	46.4	60.0	5/26/10	0	59.7	84.6	6/26/10	0	60.1	86.4	7/26/10	0.01	55.1	81.6	8/26/10	0.01	52.0	73.9
4/27/10	0	33.6	49.2	5/27/10	0	58.4	86.9	6/27/10	0.29	68.8	89.7	7/27/10	0	59.1	85.0	8/27/10	0	46.7	77.6
4/28/10	0	29.1	56.4	5/28/10	0	63.9	83.2	6/28/10	0.20	65.2	82.6	7/28/10	0.01	63.5	88.5	8/28/10	0	48.5	84.4
4/29/10	0	31.3	67.1	5/29/10	0	58.8	83.8	6/29/10	0	53.0	72.0	7/29/10	0	60.9	78.0	8/29/10	0	52.3	89.0
4/30/10	0	46.5	80.8	5/30/10	0	54.7	87.4	6/30/10	0	49.9	70.0	7/30/10	0	56.5	79.2	8/30/10	0	60.1	91.6
				5/31/10	0.91	64.3	83.5					7/31/10	0	61.8	80.1	8/31/10	0	61.9	90.3

Daily Weather Summary for 4/1/2011 to 8/31/2011 at OARDC – Muck Crops Agricultural Research Station, Willard, Ohio 44890

Huron County, Latitude: 41° 01' N; Longitude: 82° 73' W.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F
4/1/11	0	29.9	48.4	5/1/11	0.38	52.7	66	6/1/11	0	63.7	83.4	7/1/11	0	60.5	91	8/1/11	0	66.4	87.2
4/2/11	0.12	32.6	44.3	5/2/11	0.77	46.2	60.7	6/2/11	0	53	72	7/2/11	0.11	69.9	87.9	8/2/11	0	67.3	85.8
4/3/11	0	27.1	52.6	5/3/11	0.64	39.9	46.3	6/3/11	0	47.5	78.9	7/3/11	0	68.4	88	8/3/11	0.13	70.6	81.4
4/4/11	1.15	40.5	64.2	5/4/11	0	36.3	53.1	6/4/11	0	59.5	95.5	7/4/11	0	64.7	87.4	8/4/11	0	65.7	82.8
4/5/11	0	30.8	43.2	5/5/11	0	33.8	62.3	6/5/11	0	65.3	88.1	7/5/11	0	56.8	88.5	8/5/11	0	62	87.8
4/6/11	0	31	60	5/6/11	0.04	45.6	62.3	6/6/11	0	62	89.7	7/6/11	0	63.3	91	8/6/11	1.12	69.6	87.4
4/7/11	0	35.6	44.8	5/7/11	0	46.8	66.8	6/7/11	0	69	88.9	7/7/11	0	64.3	85.7	8/7/11	0.04	69.4	85
4/8/11	0.27	38.9	51.6	5/8/11	0	45.1	67.6	6/8/11	0	70.9	98	7/8/11	0	61	83.7	8/8/11	0.01	66.1	81.2
4/9/11	0	43.1	59.3	5/9/11	0	38.5	70.5	6/9/11	0	65.3	88	7/9/11	0	54.5	89.3	8/9/11	0.84	62.8	81.5
4/10/11	0	46.6	80.9	5/10/11	0	52.4	78	6/10/11	0.98	59.9	83.8	7/10/11	0	59.1	90.8	8/10/11	0	58.4	75.9
4/11/11	0.07	50.2	72.1	5/11/11	0	55.2	83.1	6/11/11	0.01	63	82.2	7/11/11	1.05	67.3	89.1	8/11/11	0	52	77.2
4/12/11	0	37.7	50.6	5/12/11	0.17	57.1	87.7	6/12/11	0	55.1	70.3	7/12/11	0.01	67.9	87.4	8/12/11	0	52.4	80.9
4/13/11	0	30.4	60.6	5/13/11	0.68	61.4	83.4	6/13/11	0	50.3	75.9	7/13/11	0	59.9	78	8/13/11	0	59.1	84.2
4/14/11	0	32.7	57.8	5/14/11	0.42	55.5	74.7	6/14/11	0	52.4	71.1	7/14/11	0	53.4	82.4	8/14/11	0.12	61.9	72.1
4/15/11	0	35.7	67.5	5/15/11	0.04	45.3	55.4	6/15/11	0	48.5	75.4	7/15/11	0	55.5	86.2	8/15/11	0	63.1	77.3
4/16/11	0.23	37.2	63.3	5/16/11	0.14	41.8	45.2	6/16/11	0.06	57.9	75.5	7/16/11	0	64.4	87	8/16/11	0	52.9	82
4/17/11	0	36.1	54.7	5/17/11	0.32	42.8	47.4	6/17/11	0.07	58.2	81.8	7/17/11	0	66.8	90.7	8/17/11	0	55.4	83.1
4/18/11	0.1	36.2	43	5/18/11	0.02	47.2	65.9	6/18/11	0	62.4	82.1	7/18/11	0.04	72.1	90.9	8/18/11	0	59.1	86.1
4/19/11	0.66	35.2	61.7	5/19/11	0.07	51.5	64	6/19/11	0.59	64	81.9	7/19/11	0	70	90.8	8/19/11	0	62.3	84
4/20/11	0.45	39.8	68.6	5/20/11	0	53.2	75.2	6/20/11	0.02	61.3	76.5	7/20/11	0.04	63.4	94.2	8/20/11	0	56.8	84
4/21/11	0	32.2	49.7	5/21/11	0	47.2	79.7	6/21/11	0.06	66.3	89.8	7/21/11	0	74.2	97.3	8/21/11	0.09	61	80.6
4/22/11	0.2	38	53.2	5/22/11	0	66.6	86.4	6/22/11	0	68.4	82.3	7/22/11	0.42	71.7	96.5	8/22/11	0	50	76.2
4/23/11	0.08	53.5	74	5/23/11	0.27	63.1	82.6	6/23/11	0.09	64.7	75.7	7/23/11	2.9	69.7	90.2	8/23/11	0	52	80.9
4/24/11	0.23	51.3	57.3	5/24/11	0.27	61.1	77	6/24/11	0.13	60.4	66.7	7/24/11	0.46	70.2	86.4	8/24/11	0.87	62.2	86.5
4/25/11	1.57	48	63.4	5/25/11	1.21	54.7	81	6/25/11	0	60	75.2	7/25/11	0.02	70.1	84.2	8/25/11	0.6	63.9	77
4/26/11	0.01	47.2	73	5/26/11	0.71	51.3	75.1	6/26/11	0	55.8	79.8	7/26/11	0.01	64.8	85.2	8/26/11	0	55.3	78.5
4/27/11	0.18	58.5	73.4	5/27/11	0.03	50.2	62.9	6/27/11	0	51.5	82	7/27/11	0	59.7	84.2	8/27/11	0.01	53.1	79
4/28/11	0.02	43.3	64.5	5/28/11	0.12	55	75.9	6/28/11	0	62.7	84	7/28/11	0.57	74.3	91.5	8/28/11	0.05	56.3	75.5
4/29/11	0	40.3	59.1	5/29/11	0.2	62	87.6	6/29/11	0	53	81.4	7/29/11	0	71.2	82.8	8/29/11	0	51.4	76.2
4/30/11	0	35.6	63.3	5/30/11	0	66	91.1	6/30/11	0	51.5	86.2	7/30/11	0	64.6	87.8	8/30/11	0	48.1	78.1
				5/31/11	0	68	93.2					7/31/11	0	61.6	89.1	8/31/11	0	59.7	82.8

Daily Weather Summary for 4/1/2011 to 8/31/2011 at OARDC – North Central Agricultural Research Station, Fremont, Ohio 43420
Sandusky County, Latitude: 41° 35' N; Longitude: 83° 12' W; Elevation: 636 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/11	0	28.3	50.8	5/1/11	0.17	55.3	64.7	6/1/11	0	64.2	83.1	7/1/11	0	63.2	92.7	8/1/11	0.48	68.4	87.5
4/2/11	0.06	34.3	46.5	5/2/11	0.16	46.3	59.2	6/2/11	0	56.9	69.1	7/2/11	0.03	71.7	92.9	8/2/11	0	70	87.7
4/3/11	0.03	27.5	50.4	5/3/11	0.47	41.9	48.3	6/3/11	0	51.9	77	7/3/11	0	69.5	86.6	8/3/11	0.21	72.4	82.3
4/4/11	0.66	42.1	66.9	5/4/11	0.01	37.1	55.5	6/4/11	0	60.4	94.2	7/4/11	0	67.2	83.8	8/4/11	0	67.8	81
4/5/11	0.01	34.4	45.2	5/5/11	0	36.7	63.7	6/5/11	0	67.1	88.1	7/5/11	0	59.8	90.2	8/5/11	0	64.5	86.3
4/6/11	0.01	34.4	56.1	5/6/11	0.12	48.2	62.7	6/6/11	0	62.9	89.9	7/6/11	0	67	90.1	8/6/11	0.82	68.1	87.8
4/7/11	0	36.5	42.9	5/7/11	0.07	48	66.9	6/7/11	0	72	96	7/7/11	0	68	83.1	8/7/11	0.04	70.4	85.6
4/8/11	0.66	38.4	49.1	5/8/11	0	45.6	64.6	6/8/11	0	71.9	96.2	7/8/11	0.35	66	81.3	8/8/11	0	68.7	83.5
4/9/11	0	42.3	55.3	5/9/11	0	40.4	66.5	6/9/11	0	64.9	82.2	7/9/11	0	60.8	89.8	8/9/11	0.44	64	83.2
4/10/11	0.01	40.2	82.7	5/10/11	0	51.9	74	6/10/11	0.76	59	81.8	7/10/11	0	66.6	91.8	8/10/11	0.01	59.9	77.2
4/11/11	0.06	48.4	72.8	5/11/11	0	54.4	79.9	6/11/11	0.01	62.8	82.2	7/11/11	0.65	69	88.7	8/11/11	0	52.9	78.7
4/12/11	0	40.7	53.7	5/12/11	0.15	56.4	85.7	6/12/11	0	57.2	71.9	7/12/11	0	69.2	89.2	8/12/11	0	56.7	81.2
4/13/11	0	33.5	64.6	5/13/11	0.2	64.7	82.6	6/13/11	0	55.8	77	7/13/11	0	65.2	78.1	8/13/11	0	59.6	85
4/14/11	0	37.4	54.5	5/14/11	0.16	55.6	71.9	6/14/11	0	55	70.9	7/14/11	0	57.3	79.7	8/14/11	0.38	62.1	71.9
4/15/11	0	39.2	47.8	5/15/11	0.44	44.9	55.5	6/15/11	0	52.5	74.1	7/15/11	0	59.7	83.1	8/15/11	0.01	63.1	78.2
4/16/11	0.4	37.3	59.2	5/16/11	0.3	43.2	46.2	6/16/11	0.05	57.7	75.9	7/16/11	0	66	89.4	8/16/11	0	55.9	82.7
4/17/11	0.01	37.3	53.5	5/17/11	0.23	44.5	50.8	6/17/11	0.18	58.2	82.4	7/17/11	0	69.7	92.7	8/17/11	0	57.9	83.7
4/18/11	0.17	37.3	44.5	5/18/11	0.03	49.8	64.7	6/18/11	0.01	62.8	82.9	7/18/11	0.52	73.4	91.9	8/18/11	0	62	86.3
4/19/11	0.57	36.8	41.7	5/19/11	0.14	54.5	66.7	6/19/11	1.2	64.5	80.6	7/19/11	0.01	74.6	87.9	8/19/11	0	61.3	83.8
4/20/11	0.41	40.1	61.4	5/20/11	0	54.7	73.7	6/20/11	0.17	62.5	75.7	7/20/11	0	69.5	94.4	8/20/11	0	60.1	84.1
4/21/11	0	34	50.8	5/21/11	0.01	50.4	80.2	6/21/11	0.71	66.4	91.2	7/21/11	0	76.5	98.6	8/21/11	0.07	61.6	79
4/22/11	0.6	38.6	50.2	5/22/11	0.29	63.6	85.5	6/22/11	0.28	68.1	84.3	7/22/11	0.28	72	96.8	8/22/11	0	51.6	77.2
4/23/11	0.09	50.3	74.9	5/23/11	0.25	63.6	82.9	6/23/11	0	66.6	76.4	7/23/11	1.84	71.9	92.3	8/23/11	0	54.3	82
4/24/11	0.03	51.6	57.5	5/24/11	0.38	59.1	78.3	6/24/11	0.06	62.3	69.2	7/24/11	0.16	71.7	88.4	8/24/11	1.26	63.8	88.7
4/25/11	1.56	44.6	51.9	5/25/11	1.51	55	79.2	6/25/11	0.01	59.6	78.1	7/25/11	0	71.5	85.3	8/25/11	0.03	63.5	78.4
4/26/11	0.03	44	72.2	5/26/11	0.39	51	74.2	6/26/11	0	60.3	78.8	7/26/11	0	65.5	86	8/26/11	0	56.3	79.7
4/27/11	0.15	60.2	73.5	5/27/11	0.09	50.2	58.6	6/27/11	0	57.6	83.6	7/27/11	0	62.5	85.7	8/27/11	0.01	55.7	79.7
4/28/11	0.04	45.2	64.7	5/28/11	0.3	55.5	74.8	6/28/11	0	64.3	81.3	7/28/11	0.54	75.3	91.4	8/28/11	0	58.9	76.8
4/29/11	0	41.8	60.5	5/29/11	0.02	62.4	87.2	6/29/11	0	57.4	81.1	7/29/11	0.16	72.5	83.2	8/29/11	0	53.3	76.9
4/30/11	0	39	64.2	5/30/11	0	64.4	90.5	6/30/11	0	56.4	84.4	7/30/11	0	67.4	87.9	8/30/11	0	51.5	80.7
				5/31/11	0	69.6	91.5					7/31/11	0	65.3	91	8/31/11	0	58.1	82.4

Daily Weather Summary for 4/1/2011 to 8/31/2011 at OARDC, Wooster, Ohio 44691
Wayne County, one mile south of Wooster; Latitude: 40° 77' N; Longitude: 81° 93' W; Elevation: 1020 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/11	0	31.3	48.3	5/1/11	0.21	52.3	67.8	6/1/11	0	66.6	83.1	7/1/11	0	57.2	88.4	8/1/11	0.07	65.8	87.9
4/2/11	0.16	33.6	46.8	5/2/11	0.31	47.5	62.4	6/2/11	0	52.8	70.3	7/2/11	0.23	68.3	83.5	8/2/11	0	63.5	86.9
4/3/11	0	28.4	48.8	5/3/11	0.76	43.3	47.5	6/3/11	0	42.8	78	7/3/11	0	64.5	86.2	8/3/11	0.17	69.1	82.2
4/4/11	1.2	43	67.3	5/4/11	0.02	39.1	51.7	6/4/11	0.12	53.1	89.2	7/4/11	0	62.7	86.2	8/4/11	0	66.6	84.8
4/5/11	0.03	33.2	43.1	5/5/11	0	34.8	61.9	6/5/11	0.45	62.7	84.7	7/5/11	0	56.4	87.1	8/5/11	0	64.7	90
4/6/11	0	31.9	60.6	5/6/11	0.01	41	60.4	6/6/11	0	56.4	86.5	7/6/11	0	60.4	88.8	8/6/11	1.32	70.2	87.4
4/7/11	0	39.7	51.8	5/7/11	0.03	45.5	66.9	6/7/11	0.72	62.8	78.8	7/7/11	0	64.2	86.1	8/7/11	0.01	68.6	85.9
4/8/11	0.07	44.1	50.9	5/8/11	0	47.1	67.2	6/8/11	0	64.3	91.5	7/8/11	0.75	61.1	80.3	8/8/11	0	66.5	83.2
4/9/11	0	42.6	55.7	5/9/11	0	38.9	69.2	6/9/11	0.02	68.3	85.3	7/9/11	0	55.2	88.4	8/9/11	0.71	62.9	80.6
4/10/11	0	42.7	83.2	5/10/11	0	50.1	76.8	6/10/11	0.51	62	81.5	7/10/11	0	60.9	89	8/10/11	0.01	61.5	77.1
4/11/11	0.13	53.9	74.5	5/11/11	0	52.9	84.4	6/11/11	0.02	62.2	82.7	7/11/11	0.73	67.3	87.7	8/11/11	0	54.7	76.4
4/12/11	0.09	42.2	53.7	5/12/11	0.74	60.9	82.7	6/12/11	0	51.6	69.8	7/12/11	0	68	88	8/12/11	0	50.6	82
4/13/11	0	36	59.5	5/13/11	1.27	60.5	82	6/13/11	0	49.4	73.5	7/13/11	0	61.8	77.3	8/13/11	0	57.3	85.1
4/14/11	0	33.5	64.3	5/14/11	0.33	59.7	77.9	6/14/11	0	50.2	68.3	7/14/11	0	57.1	80.2	8/14/11	0.35	63.8	73.2
4/15/11	0	42.7	69.8	5/15/11	0.4	45.7	62.4	6/15/11	0	49.7	73.2	7/15/11	0	58.5	86	8/15/11	0.17	62.4	76.2
4/16/11	0.67	40	64.6	5/16/11	0.03	43.7	47.6	6/16/11	0.01	59.5	76.7	7/16/11	0	63	85.8	8/16/11	0	56.1	80.1
4/17/11	0.01	37.7	56.8	5/17/11	0.17	44.9	51	6/17/11	0.02	56.7	81.9	7/17/11	0	64.9	88	8/17/11	0	53.7	83.2
4/18/11	0	39.9	52.4	5/18/11	0.01	51.1	67	6/18/11	0.01	62.6	83.2	7/18/11	0.16	68.8	89.4	8/18/11	0	58.9	84.7
4/19/11	0.45	38.8	60.2	5/19/11	0	52.4	65.7	6/19/11	0.29	63.6	80.8	7/19/11	0.04	71.3	88.5	8/19/11	0.01	62.5	85.4
4/20/11	0.38	41.4	64.3	5/20/11	0	55.2	73.9	6/20/11	0.03	60.2	76.1	7/20/11	0	67.6	92.9	8/20/11	0	55.7	84.4
4/21/11	0	37.4	50.8	5/21/11	0	48.1	79.6	6/21/11	0.67	66.6	87.2	7/21/11	0	72.8	93.9	8/21/11	0	63.1	79.3
4/22/11	0.13	38.7	53.5	5/22/11	0	62.4	84.5	6/22/11	0.01	68.7	79.8	7/22/11	0.27	71.6	95	8/22/11	0.01	53.1	74.4
4/23/11	0.07	53.5	70.6	5/23/11	0.4	63	79.7	6/23/11	0.13	64.9	77.2	7/23/11	0.65	71.4	90.3	8/23/11	0	51.4	82.1
4/24/11	0.39	52.8	59.5	5/24/11	1.28	61.4	77.4	6/24/11	0.11	60	67.8	7/24/11	0.08	71.3	88.8	8/24/11	0.38	61.5	84.9
4/25/11	0.44	53.9	72.2	5/25/11	0.7	59.6	80.4	6/25/11	0	60.8	71	7/25/11	0	68.4	85.8	8/25/11	0.45	63.3	78.3
4/26/11	0.06	55.8	76.6	5/26/11	0.59	59	75.8	6/26/11	0	56.8	78.3	7/26/11	0.01	65.1	85.2	8/26/11	0	58.3	77.8
4/27/11	0.17	57.6	77	5/27/11	0.01	57.3	70.1	6/27/11	0	53.3	80.6	7/27/11	0	59.7	85.1	8/27/11	0	53.6	78.5
4/28/11	0.06	46.2	64.8	5/28/11	0	55.6	77.1	6/28/11	0	64.9	81.2	7/28/11	0.01	70.8	90.7	8/28/11	0	58	75.6
4/29/11	0.04	41.4	56.8	5/29/11	0	63.3	87	6/29/11	0	55.6	76.7	7/29/11	0	72.6	87.4	8/29/11	0	53	75.7
4/30/11	0	33.5	62.3	5/30/11	0	65.2	89.4	6/30/11	0	52.7	83.8	7/30/11	0	67.2	88.2	8/30/11	0	49.3	80
				5/31/11	0	65.6	90.7					7/31/11	0	61.1	89.1	8/31/11	0	57.6	83.9

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

General Trial Information

Study Director: DOUG DOOHAN **Title:** Professor, Res.Assoc.
Investigator: Dr. Douglas J. Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: F one-year/final **Trial Reliability:** RELIABLE
Initiation Date: 5/20/2011 **Planned Completion Date:** 10/31/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
The objective of this trial is to observe height reduction and weed control in orchard floor middles with Aim/Poast/COCcombinations and Roundup Weatherax/Aim/NIS combinations. The parameters are weed control and orchard floor (grass) species height at 1, 2, 3, and 7 weeks after treatment.

Conclusions:
At 7 weeks after treatment (WAT), results indicate that the Roundup/ Aim + adjuvant combos provided significantly superior grass and broadleaf supression over the Aim /Poast / COC treatments.

The best overall treatment was treatment # 5, Roundup (3oz) + Aim(1oz) + NIS (3.2 oz/)A, providing suppression of 90% (orchardgrass), 90% (perennial rye) and 79% (roughstalk bluegrass) over the untreated controls. Treatment #4, Roundup/Aim (with COC as the adjuvant) provided 65%, 81% and 87% respectively for the same species AT 7WAT.

The Aim / Poast / COC treatments averaged around the 10% or less grass suppression over the untreated control plots.

Personnel

Study Director: DOUG DOOHAN **Title:** Professor, Res.Assoc.
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Dr. Douglas J. Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Cooperator/Landowner

Cooperator: Bruce Williams **Role:** Farm Manager
Organization: OARDC/ The Ohio State University **Org. Type:** Research
Address 1: 1680 Madison Ave
Phone No.: 3302633878 2944
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-0412
Postal Code: 44691 **E-mail:** williams.20@osu.edu
Country: USA United States

Crop Description

Crop 1: MABSD Malus domestica Apple
Variety: GOLDEN DELICOUS **Description:** (ORCHARD ALLEYWAYS)
BBCH Scale: BPOM
Seed Bed: COMPAC compacted

Pest Description

Pest 1 Type: W **Code:** DACGL Dactylis glomerata
Common Name: Orchard grass

Pest 2 Type: W **Code:** HIECA Hieracium caespitosum
Common Name: Yellow hawkweed

Pest 3 Type: W **Code:** LOLPE Lolium perenne
Common Name: Perennial ryegrass

Pest 4 Type: W **Code:** OXAST Oxalis stricta
Common Name: Common yellow wood sorrel

Pest 5 Type: W **Code:** PLALA Plantago lanceolata
Common Name: Buckhorn plantain

Pest 6 Type: W **Code:** PLAMA Plantago major
Common Name: Broadleaf plantain

Pest 7 Type: W **Code:** POATR Poa trivialis
Common Name: Rough-stalk bluegrass

Pest 8 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion

Pest 9 Type: W **Code:** TRFRE Trifolium repens
Common Name: White clover

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

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Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Site and Design

Plot Width, Unit: 5 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT PLOT plot
Plot Area, Unit: 125 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
% Slope: 0.0 **Untreated Arrangement:** INCLUDED single control randomized in each block

Field Prep./Maintenance:
Trial was maintained by the OARDC Hort and Crop Science Manager as outlined in 2011 OSU Treee Fruit Spray Guide. There was no herbicide sprayed under the apple trees themselves.

Soil Description

Description Name: SILT LOAM
% Sand: 11 **% OM:** 3.0 **Texture:** SIL silt loam
% Silt: 75 **pH:** 6.99 **Soil Name:** WOOSTER SILT LOAM
% Clay: 14 **CEC:** 8.3 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 5 MI

Application Description

	A
Application Date:	5/20/2011
Time of Day:	11:00 AM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROADC
Applied By:	Tim Koch
Air Temperature, Unit:	68.4 F
% Relative Humidity:	71.5
Wind Velocity, Unit:	1 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	62.3 F
Soil Moisture:	NORMAL
% Cloud Cover:	60
Next Rain Occurred On:	5/23/2011

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APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

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Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	MABSD BPOM
Stage Scale Used:	BLOOM
Height, Unit:	6 FT
Height Minimum, Maximum:	5 7

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	DACGL W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	4 M2
Pest 2 Code, Type, Scale:	HIECA W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	2 M2
Pest 3 Code, Type, Scale:	LOLPE W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
M2	
Pest 4 Code, Type, Scale:	OXAST W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	20 M2
Pest 5 Code, Type, Scale:	PLALA W POST
Height, Unit:	5 IN
Height Minimum, Maximum:	4 8
Density, Unit:	10 M2
Pest 6 Code, Type, Scale:	PLAMA W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	5 PLA/m2
Pest 7 Code, Type, Scale:	POATR W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	4 M2

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Pest 8 Code, Type, Scale:	TAROF W POST
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	6 M2
Pest 9 Code, Type, Scale:	TRFRE W POST
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4
Density, Unit:	5 M2

Application Equipment

	A
Appl. Equipment:	SPRAY
Equipment Type:	BACKPK
Operation Pressure, Unit:	40 PSI
Nozzle Type:	FLATFAN
Nozzle Size:	8001 VS
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.3 MPH
Carrier:	WATER
Spray Volume, Unit:	10 GPA
Mix Size, Unit:	1 liters
Propellant:	CO2

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

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Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Reps: 4 Appl Code: B Plots: 5 by 25 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .47796)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code	Re-Entry Interval	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	AIM+	2	LB/GAL	EC	0.5	A	0.0078	lb ai/a	POST	B	0.39 ml/mx	102	205	302	404
	POAST+	1.5	LB/GAL	EC	10	A	0.117	lb ai/a	POST	B	7.799 ml/mx				
	COC	100	%W/W	SL	2	A	2.5	% v/v	POST	B	25.0 ml/mx				
3	AIM+	2	LB/GAL	EC	1.0	A	0.0156	lb ai/a	POST	B	0.7799 ml/mx	103	201	304	402
	POAST+	1.5	LB/GAL	EC	10	A	0.117	lb ai/a	POST	B	7.799 ml/mx				
	COC	100	%W/W	SL	2	A	2.5	% v/v	POST	B	25.0 ml/mx				
4	ROUNDUP WEATHERMAX+	5.5	LB/GAL	L	3	A	0.129	lb ai/a	POST	B	2.345 ml/mx	104	203	305	403
	AIM+	2	LB/GAL	EC	0.5	A	0.0078	lb ai/a	POST	B	0.39 ml/mx				
	COC	100	%W/W	SL	2	A	2.5	% v/v	POST	B	25.0 ml/mx				
5	ROUNDUP WEATHERMAX+	5.5	LB/GAL	L	3	A	0.129	lb ai/a	POST	B	2.345 ml/mx	105	202	301	405
	AIM+	2	LB/GAL	EC	1.0	A	0.0156	lb ai/a	POST	B	0.7799 ml/mx				
	NIS	100	%W/W	SL	0.25	A	0.25	% v/v	POST	B	2.5 ml/mx				

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APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .47796)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code	Re-Entry Interval	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL											101	204	303	401

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
0.975	ml	AIM+	2	EC	0.5
19.498	ml	POAST+	1.5	EC	10
93.740	ml	COC	100	SL	2
1.950	ml	AIM+	2	EC	1.0
5.863	ml	ROUNDUP WEATHERMAX+	5.5	L	3
3.125	ml	NIS	100	SL	0.25

* 'Per area' calculations based on spray volume= 10 gal/ac, mix size= 1 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 10 gal/ac, mix size= 1 liters.

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Sponsor Contact: Joe Reed

Rep	Blk										
4	4	401	1	402	3	403	4	404	2	405	5
3	3	301	5	302	2	303	1	304	3	305	4
2	2	201	3	202	5	203	4	204	1	205	2
1	1	101	1	102	2	103	3	104	4	105	5

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APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code					DACGL	HIECA	LOLPE	OXAST	PLALA	PLAMA	POATR
Pest Scientific Name					Dactylis glome>	Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>	Plantago major	Poa trivialis
Pest Name					Orchard grass	Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>	Broadleaf plan>	Rough-stalk bl>
Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
Crop Variety					Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
Part Rated					PLANT -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -
Rating Date					5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011
Rating Type					HEIGHT	CONTROL	HEIGHT	CONTROL	CONTROL	CONTROL	HEIGHT
Rating Unit					IN	%	IN	%	%	%	IN
Number of Subsamples					0	0	0	0	0	0	0
Days After First/Last Applic.					7 7	7 7	7 7	7 7	7 7	7 7	7 7
Trt-Eval Interval					1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7
1	UNTREATED CONTROL				101	19.00	0.0	12.00	0.0	0.0	0.0	10.50
					204	18.00	0.0	11.50	0.0	0.0	0.0	11.00
					303	19.00	0.0	12.50	0.0	0.0	0.0	11.50
					401	18.50	0.0	11.50	0.0	0.0	0.0	10.00
					Mean =	18.63	0.0	11.88	0.0	0.0	0.0	10.75
2	AIM+	0.0078	lb ai/a	B	102	18.00	5.0	8.50	5.0	5.0	5.0	8.50
	POAST+	0.117	lb ai/a	B	205	17.50	25.0	7.60	5.0	20.0	20.0	7.50
	COC	2.5	% v/v	B	302	18.00	5.0	8.00	10.0	20.0	20.0	7.00
					404	19.00	10.0	8.00	5.0	10.0	10.0	5.00
					Mean =	18.13	11.3	8.03	6.3	13.8	13.8	7.00
3	AIM+	0.0156	lb ai/a	B	103	16.50	10.0	8.00	5.0	15.0	15.0	7.50
	POAST+	0.117	lb ai/a	B	201	16.00	30.0	7.00	5.0	20.0	20.0	7.00
	COC	2.5	% v/v	B	304	17.00	15.0	8.00	10.0	20.0	20.0	8.00
					402	17.00	10.0	7.00	5.0	15.0	15.0	6.50
					Mean =	16.63	16.3	7.50	6.3	17.5	17.5	7.25
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104	12.00	20.0	5.50	10.0	20.0	20.0	7.00
	AIM+	0.0078	lb ai/a	B	203	10.50	30.0	4.00	10.0	15.0	15.0	7.50
	COC	2.5	% v/v	B	305	12.00	15.0	5.00	10.0	20.0	20.0	6.50
					403	11.00	20.0	5.50	10.0	20.0	20.0	5.00
					Mean =	11.38	21.3	5.00	10.0	18.8	18.8	6.50
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105	9.50	20.0	6.00	10.0	25.0	25.0	4.50
	AIM+	0.0156	lb ai/a	B	202	10.00	35.0	6.50	10.0	25.0	25.0	2.50
	NIS	0.25	% v/v	B	301	9.00	30.0	4.50	10.0	15.0	15.0	5.00
					405	9.00	30.0	4.00	10.0	15.0	15.0	5.00
					Mean =	9.38	28.8	5.25	10.0	20.0	20.0	4.25

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	8	9	10	11	12	13	14
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					TAROF	TRFRE	DACGL	HIECA	LOLPE	OXAST	PLALA
	Pest Scientific Name					Taraxacum offi>	Trifolium repe>	Dactylis glome>	Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>
	Pest Name					Common dandeli>	White clover	Orchard grass	Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety					Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					5/27/2011	5/27/2011	6/3/2011	6/3/2011	6/3/2011	6/3/2011	6/3/2011
	Rating Type					CONTROL	CONTROL	HEIGHT	CONTROL	HEIGHT	CONTROL	CONTROL
	Rating Unit					%	%	IN	%	IN	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					7 7	7 7	14 14	14 14	14 14	14 14	14 14
	Trt-Eval Interval					1WAT	1WAT	2WAT	2WAT	2WAT	2WAT	2WAT
1	UNTREATED CONTROL				101	0.0	0.0	20.00	0.0	16.00	0.0	0.0
					204	0.0	0.0	19.50	0.0	14.50	0.0	0.0
					303	0.0	0.0	18.00	0.0	19.00	0.0	0.0
					401	0.0	0.0	19.00	0.0	18.00	0.0	0.0
					Mean =	0.0	0.0	19.13	0.0	16.88	0.0	0.0
2	AIM+	0.0078	lb ai/a	B	102	5.0	5.0	18.80	20.0	8.00	0.0	5.0
	POAST+	0.117	lb ai/a	B	205	20.0	25.0	17.50	20.0	8.00	0.0	10.0
	COC	2.5	% v/v	B	302	15.0	10.0	21.00	20.0	18.00	25.0	30.0
					404	10.0	10.0	19.50	20.0	8.00	5.0	5.0
					Mean =	12.5	12.5	19.20	20.0	10.50	7.5	12.5
3	AIM+	0.0156	lb ai/a	B	103	10.0	10.0	18.80	5.0	10.00	0.0	20.0
	POAST+	0.117	lb ai/a	B	201	20.0	15.0	25.00	10.0	9.50	2.0	20.0
	COC	2.5	% v/v	B	304	20.0	15.0	9.00	15.0	11.50	0.0	30.0
					402	10.0	10.0	9.00	10.0	7.50	15.0	15.0
					Mean =	15.0	12.5	15.45	10.0	9.63	4.3	21.3
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104	20.0	20.0	23.00	15.0	8.00	85.0	30.0
	AIM+	0.0078	lb ai/a	B	203	20.0	25.0	7.50	25.0	8.50	40.0	30.0
	COC	2.5	% v/v	B	305	15.0	20.0	2.00	30.0	8.50	80.0	70.0
					403	10.0	10.0	6.00	35.0	7.50	85.0	85.0
					Mean =	16.3	18.8	9.63	26.3	8.13	72.5	53.8
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105	20.0	15.0	10.00	15.0	7.50	95.0	70.0
	AIM+	0.0156	lb ai/a	B	202	20.0	10.0	10.00	20.0	8.50	85.0	50.0
	NIS	0.25	% v/v	B	301	20.0	15.0	10.00	25.0	8.00	95.0	60.0
					405	15.0	15.0	8.00	30.0	7.00	95.0	95.0
					Mean =	18.8	13.8	9.50	22.5	7.75	92.5	68.8

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	15	16	17	18	19	20	21
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					PLAMA	POATR	TAROF	TRFRE	DACGL	HIECA	LOLPE
	Pest Scientific Name					Plantago major	Poa trivialis	Taraxacum offi>	Trifolium repe>	Dactylis glome>	Hieracium caes>	Lolium perenne
	Pest Name					Broadleaf plan>	Rough-stalk bl>	Common dandeli>	White clover	Orchard grass	Yellow hawkweed	Perennial ryeg>
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety					Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated					WEED -	PLANT -	WEED -	WEED -	PLANT -	WEED -	PLANT -
	Rating Date					6/3/2011	6/3/2011	6/3/2011	6/3/2011	6/10/2011	6/10/2011	6/10/2011
	Rating Type					CONTROL	HEIGHT	CONTROL	CONTROL	HEIGHT	CONTROL	HEIGHT
	Rating Unit					%	IN	%	%	INCH	%	INCH
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					14 14	14 14	14 14	14 14	21 21	21 21	21 21
	Trt-Eval Interval					2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT
1	UNTREATED CONTROL				101	0.0	14.50	0.0	0.0	22.00	0.0	25.00
					204	0.0	16.00	0.0	0.0	21.00	0.0	22.00
					303	0.0	18.00	0.0	0.0	20.00	0.0	26.00
					401	0.0	17.00	0.0	0.0	21.00	0.0	25.00
					Mean =	0.0	16.38	0.0	0.0	21.00	0.0	24.50
2	AIM+	0.0078	lb ai/a	B	102	5.0	11.50	5.0	10.0	20.00	0.0	18.80
	POAST+	0.117	lb ai/a	B	205	2.0	11.50	5.0	5.0	20.00	0.0	5.40
	COC	2.5	% v/v	B	302	5.0	6.00	5.0	20.0	19.00	0.0	24.00
					404	5.0	7.50	5.0	5.0	20.50	0.0	12.50
					Mean =	4.3	9.13	5.0	10.0	19.88	0.0	15.18
3	AIM+	0.0156	lb ai/a	B	103	5.0	10.50	5.0	5.0	16.50	10.0	18.80
	POAST+	0.117	lb ai/a	B	201	5.0	7.00	0.0	30.0	11.00	0.0	25.00
	COC	2.5	% v/v	B	304	5.0	7.00	5.0	5.0	21.50	0.0	25.50
					402	10.0	6.00	15.0	15.0	10.50	50.0	26.00
					Mean =	6.3	7.63	6.3	13.8	14.88	15.0	23.83
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104	40.0	6.00	60.0	50.0	6.50	20.0	7.50
	AIM+	0.0078	lb ai/a	B	203	45.0	6.50	50.0	85.0	8.40	30.0	7.50
	COC	2.5	% v/v	B	305	40.0	6.00	70.0	45.0	5.00	40.0	10.50
					403	45.0	4.00	65.0	55.0	3.20	0.0	4.00
					Mean =	42.5	5.63	61.3	58.8	5.78	22.5	7.38
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105	50.0	4.50	65.0	65.0	3.40	99.0	5.00
	AIM+	0.0156	lb ai/a	B	202	5.0	9.50	75.0	20.0	4.40	99.0	10.00
	NIS	0.25	% v/v	B	301	60.0	5.50	60.0	50.0	4.50	99.0	10.00
					405	50.0	4.50	55.0	10.0	3.00	50.0	7.50
					Mean =	41.3	6.00	63.8	36.3	3.83	86.8	8.13

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	22	23	24	25	26	27	28
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					OXAST	PLALA	PLAMA	POATR	TAROF	TRFRE	DACGL
	Pest Scientific Name					Oxalis stricta	Plantago lance>	Plantago major	Poa trivialis	Taraxacum offi>	Trifolium repe>	Dactylis glome>
	Pest Name					Common yellow >	Buckhorn plant>	Broadleaf plan>	Rough-stalk bl>	Common dandeli>	White clover	Orchard grass
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety					Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated					WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	PLANT -
	Rating Date					6/10/2011	6/10/2011	6/10/2011	6/10/2011	6/10/2011	6/10/2011	7/8/2011
	Rating Type					CONTROL	CONTROL	CONTROL	HEIGHT	CONTROL	CONTROL	HEIGHT
	Rating Unit					%	%	%	INCH	%	%	INCH
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					21 21	21 21	21 21	21 21	21 21	21 21	49 49
	Trt-Eval Interval					3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	7WAT
1	UNTREATED CONTROL				101	0.0	0.0	0.0	22.00	0.0	0.0	36.00
					204	0.0	0.0	0.0	21.00	0.0	0.0	34.50
					303	0.0	0.0	0.0	20.00	0.0	0.0	33.50
					401	0.0	0.0	0.0	20.50	0.0	0.0	34.00
					Mean =	0.0	0.0	0.0	20.88	0.0	0.0	34.50
2	AIM+	0.0078	lb ai/a	B	102	10.0	15.0	40.0	20.00	10.0	15.0	32.40
	POAST+	0.117	lb ai/a	B	205	15.0	10.0	10.0	19.50	5.0	75.0	32.00
	COC	2.5	% v/v	B	302	50.0	0.0	99.0	4.50	0.0	10.0	31.50
					404	0.0	0.0	0.0	20.50	30.0	0.0	30.50
					Mean =	18.8	6.3	37.3	16.13	11.3	25.0	31.60
3	AIM+	0.0156	lb ai/a	B	103	20.0	0.0	0.0	16.50	15.0	70.0	30.50
	POAST+	0.117	lb ai/a	B	201	0.0	0.0	0.0	11.00	0.0	0.0	29.50
	COC	2.5	% v/v	B	304	0.0	0.0	0.0	18.50	0.0	0.0	30.00
					402	15.0	95.0	99.0	10.50	50.0	50.0	28.50
					Mean =	8.8	23.8	24.8	14.13	16.3	30.0	29.63
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104	80.0	30.0	30.0	6.60	70.0	75.0	14.40
	AIM+	0.0078	lb ai/a	B	203	85.0	85.0	99.0	8.50	75.0	85.0	10.80
	COC	2.5	% v/v	B	305	90.0	50.0	50.0	5.00	50.0	60.0	6.50
					403	99.0	90.0	90.0	3.20	50.0	50.0	16.00
					Mean =	88.5	63.8	67.3	5.83	61.3	67.5	11.93
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105	85.0	60.0	60.0	3.30	70.0	70.0	7.50
	AIM+	0.0156	lb ai/a	B	202	85.0	70.0	60.0	4.50	70.0	75.0	4.00
	NIS	0.25	% v/v	B	301	99.0	80.0	85.0	4.50	60.0	75.0	7.50
					405	99.0	70.0	95.0	3.00	75.0	85.0	6.80
					Mean =	92.0	70.0	75.0	3.83	68.8	76.3	6.45

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code					HIECA	LOLPE	OXAST	PLALA	PLALA	POATR	TAROF		
Pest Scientific Name					Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>	Plantago lance>	Poa trivialis	Taraxacum offi>		
Pest Name					Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>	Buckhorn plant>	Rough-stalk bl>	Common dandeli>		
Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD		
BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM		
Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica		
Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple		
Crop Variety					Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared		
Part Rated					WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -		
Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011		
Rating Type					CONTROL	HEIGHT	CONTROL	CONTROL	CONTROL	HEIGHT	CONTROL		
Rating Unit					%	INCH	%	%	%	INCH	%		
Number of Subsamples					0	0	0	0	0	0	0		
Days After First/Last Applic.					49 49	49 49	49 49	49 49	49 49	49 49	49 49		
Trt-Eval Interval					7WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT		
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	29	30	31	32	33	34	35	
1	UNTREATED CONTROL				101	0.0	30.00	0.0	0.0	0.0	26.00	0.0	
					204	0.0	32.00	0.0	0.0	0.0	28.00	0.0	
					303	0.0	24.50	0.0	0.0	0.0	24.00	0.0	
					401	0.0	24.00	0.0	0.0	0.0	26.00	0.0	
					Mean =	0.0	27.63	0.0	0.0	0.0	26.00	0.0	
2	AIM+	0.0078	lb ai/a	B	102	10.0	27.00	10.0	10.0	10.0	25.00	10.0	
	POAST+	0.117	lb ai/a	B	205	0.0	31.50	0.0	0.0	0.0	28.00	0.0	
	COC	2.5	% v/v	B	302	99.0	24.00	20.0	20.0	50.0	25.50	50.0	
					404	0.0	22.50	40.0	40.0	40.0	23.50	0.0	
					Mean =	27.3	26.25	17.5	17.5	25.0	25.50	15.0	
3	AIM+	0.0156	lb ai/a	B	103	0.0	29.00	20.0	99.0	40.0	24.50	60.0	
	POAST+	0.117	lb ai/a	B	201	0.0	28.00	0.0	0.0	0.0	28.00	0.0	
	COC	2.5	% v/v	B	304	0.0	23.00	0.0	0.0	0.0	25.00	0.0	
					402	0.0	22.00	25.0	85.0	0.0	24.50	30.0	
					Mean =	0.0	25.50	11.3	46.0	10.0	25.50	22.5	
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104	10.0	2.00	50.0	0.0	40.0	3.50	40.0	
	AIM+	0.0078	lb ai/a	B	203	99.0	2.00	30.0	0.0	0.0	2.00	30.0	
	COC	2.5	% v/v	B	305	99.0	9.00	0.0	0.0	0.0	5.50	0.0	
					403	99.0	7.50	99.0	70.0	70.0	2.00	70.0	
					Mean =	76.8	5.13	44.8	17.5	27.5	3.25	35.0	
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105	99.0	2.00	50.0	50.0	60.0	2.50	50.0	
	AIM+	0.0156	lb ai/a	B	202	99.0	3.50	50.0	50.0	20.0	3.00	50.0	
	NIS	0.25	% v/v	B	301	99.0	1.00	99.0	50.0	50.0	14.00	50.0	
					405	15.0	4.00	99.0	60.0	70.0	2.00	50.0	
					Mean =	78.0	2.63	74.5	52.5	50.0	5.38	50.0	

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed
Pest Code							TRFRE
Pest Scientific Name							Trifolium repe>
Pest Name							White clover
Crop Code							MABSD
BBCH Scale							BPOM
Crop Scientific Name							Malus domestica
Crop Name							Apple
Crop Variety							Paulared
Part Rated							WEED -
Rating Date							7/8/2011
Rating Type							CONTROL
Rating Unit							%
Number of Subsamples							0
Days After First/Last Applic.							49 49
Trt-Eval Interval							7WAT
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	36	
1	UNTREATED CONTROL				101		0.0
					204		0.0
					303		0.0
					401		0.0
					Mean =		0.0
2	AIM+	0.0078	lb ai/a	B	102		0.0
	POAST+	0.117	lb ai/a	B	205		0.0
	COC	2.5	% v/v	B	302		0.0
					404		0.0
					Mean =		0.0
3	AIM+	0.0156	lb ai/a	B	103		0.0
	POAST+	0.117	lb ai/a	B	201		10.0
	COC	2.5	% v/v	B	304		0.0
					402		0.0
					Mean =		2.5
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	104		0.0
	AIM+	0.0078	lb ai/a	B	203		90.0
	COC	2.5	% v/v	B	305		0.0
					403		0.0
					Mean =		22.5
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	105		50.0
	AIM+	0.0156	lb ai/a	B	202		0.0
	NIS	0.25	% v/v	B	301		0.0
					405		0.0
					Mean =		12.5

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
DACGL, Dactylis glomerata, = US
HIECA, Hieracium caespitosum, = US
LOLPE, Lolium perenne, = US
OXAST, Oxalis stricta, = US
PLALA, Plantago lanceolata, = US
PLAMA, Plantago major, = US
POATR, Poa trivialis, = US
TAROF, Taraxacum officinale, = US
TRFRE, Trifolium repens, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
PLANT = plant
Rating Type
HEIGHT = height
Rating Unit
IN = inch
% = percent

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				DACGL	HIECA	LOLPE	OXAST	PLALA	PLAMA	POATR
	Pest Scientific Name				Dactylis glome>	Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>	Plantago major	Poa trivialis
	Pest Name				Orchard grass	Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>	Broadleaf plan>	Rough-stalk bl>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety				Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated				PLANT -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -
	Rating Date				5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011
	Rating Type				HEIGHT	CONTROL	HEIGHT	CONTROL	CONTROL	CONTROL	HEIGHT
	Rating Unit				IN	%	IN	%	%	%	IN
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				7 7	7 7	7 7	7 7	7 7	7 7	7 7
	Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
1	UNTREATED CONTROL				18.63 a	0.0 d	11.88 a	0.0 c	0.0 b	0.0 b	10.75 a
2	AIM+	0.0078	lb ai/a	B	18.13 a	11.3 c	8.03 b	6.3 b	13.8 a	13.8 a	7.00 b
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
3	AIM+	0.0156	lb ai/a	B	16.63 b	16.3 bc	7.50 b	6.3 b	17.5 a	17.5 a	7.25 b
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	11.38 c	21.3 b	5.00 c	10.0 a	18.8 a	18.8 a	6.50 b
	AIM+	0.0078	lb ai/a	B							
	COC	2.5	% v/v	B							
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	9.38 d	28.8 a	5.25 c	10.0 a	20.0 a	20.0 a	4.25 c
	AIM+	0.0156	lb ai/a	B							
	NIS	0.25	% v/v	B							
	LSD (P=.05)				0.856	7.31	1.085	2.11	7.21	7.21	1.482
	Standard Deviation				0.555	4.74	0.704	1.37	4.68	4.68	0.962
	CV				3.75	30.6	9.35	21.07	33.41	33.41	13.45
	Bartlett's X2				0.992	0.899	4.533	0.0	4.291	4.291	2.784
	P(Bartlett's X2)				0.911	0.826	0.339	.	0.232	0.232	0.595
	Replicate F				1.338	7.481	1.273	2.667	0.762	0.762	2.036
	Replicate Prob(F)				0.3082	0.0044	0.3278	0.0951	0.5368	0.5368	0.1626
	Treatment F				227.595	20.778	61.953	35.667	12.200	12.200	23.595
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code								
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
	Pest Code				TAROF	TRFRE	DACGL	HIECA	LOLPE	OXAST	PLALA	
	Pest Scientific Name				Taraxacum offi>	Trifolium repe>	Dactylis glome>	Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>	
	Pest Name				Common dandeli>	White clover	Orchard grass	Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>	
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple	
	Crop Variety				Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
	Rating Date				5/27/2011	5/27/2011	6/3/2011	6/3/2011	6/3/2011	6/3/2011	6/3/2011	
	Rating Type				CONTROL	CONTROL	HEIGHT	CONTROL	HEIGHT	CONTROL	CONTROL	
	Rating Unit				%	%	IN	%	IN	%	%	
	Number of Subsamples				0	0	0	0	0	0	0	
	Days After First/Last Applic.				7 7	7 7	14 14	14 14	14 14	14 14	14 14	
	Trt-Eval Interval				1WAT	1WAT	2WAT	2WAT	2WAT	2WAT	2WAT	
					8	9	10	11	12	13	14	
1	UNTREATED CONTROL				0.0 b	0.0 b	19.13 a	0.0 c	16.88 a	0.0 c	0.0 b	
2	AIM+	0.0078	lb ai/a	B	12.5 a	12.5 a	19.20 a	20.0 a	10.50 b	7.5 c	12.5 b	
	POAST+	0.117	lb ai/a	B								
	COC	2.5	% v/v	B								
3	AIM+	0.0156	lb ai/a	B	15.0 a	12.5 a	15.45 a	10.0 b	9.63 b	4.3 c	21.3 b	
	POAST+	0.117	lb ai/a	B								
	COC	2.5	% v/v	B								
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	16.3 a	18.8 a	9.63 a	26.3 a	8.13 b	72.5 b	53.8 a	
	AIM+	0.0078	lb ai/a	B								
	COC	2.5	% v/v	B								
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	18.8 a	13.8 a	9.50 a	22.5 a	7.75 b	92.5 a	68.8 a	
	AIM+	0.0156	lb ai/a	B								
	NIS	0.25	% v/v	B								
	LSD (P=.05)				5.76	7.48	7.972	6.29	3.384	16.45	23.53	
	Standard Deviation				3.74	4.85	5.174	4.08	2.196	10.68	15.27	
	CV				29.89	42.19	35.49	25.92	20.77	30.21	48.86	
	Bartlett's X2				2.321	5.401	21.745	1.425	16.464	6.459	5.657	
	P(Bartlett's X2)				0.509	0.145	0.001*	0.49	0.002*	0.091	0.13	
	Replicate F				3.463	1.487	1.627	3.875	2.726	2.085	1.764	
	Replicate Prob(F)				0.0510	0.2679	0.2352	0.0378	0.0906	0.1557	0.2074	
	Treatment F				15.448	8.150	3.478	27.300	11.317	66.987	14.330	
	Treatment Prob(F)				0.0001	0.0020	0.0416	0.0001	0.0005	0.0001	0.0002	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	15	16	17	18	19	20	21
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				PLAMA	POATR	TAROF	TRFRE	DACGL	HIECA	LOLPE
	Pest Scientific Name				Plantago major	Poa trivialis	Taraxacum offi>	Trifolium repe>	Dactylis glome>	Hieracium caes>	Lolium perenne
	Pest Name				Broadleaf plan>	Rough-stalk bl>	Common dandeli>	White clover	Orchard grass	Yellow hawkweed	Perennial ryeg>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety				Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated				WEED -	PLANT -	WEED -	WEED -	PLANT -	WEED -	PLANT -
	Rating Date				6/3/2011	6/3/2011	6/3/2011	6/3/2011	6/10/2011	6/10/2011	6/10/2011
	Rating Type				CONTROL	HEIGHT	CONTROL	CONTROL	HEIGHT	CONTROL	HEIGHT
	Rating Unit				%	IN	%	%	INCH	%	INCH
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				14 14	14 14	14 14	14 14	21 21	21 21	21 21
	Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT
1	UNTREATED CONTROL				0.0 b	16.38 a	0.0 b	0.0 c	21.00 a	0.0 b	24.50 a
2	AIM+	0.0078	lb ai/a	B	4.3 b	9.13 b	5.0 b	10.0 bc	19.88 a	0.0 b	15.18 b
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
3	AIM+	0.0156	lb ai/a	B	6.3 b	7.63 b	6.3 b	13.8 bc	14.88 b	15.0 b	23.83 a
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	42.5 a	5.63 b	61.3 a	58.8 a	5.78 c	22.5 b	7.38 c
	AIM+	0.0078	lb ai/a	B							
	COC	2.5	% v/v	B							
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	41.3 a	6.00 b	63.8 a	36.3 ab	3.83 c	86.8 a	8.13 c
	AIM+	0.0156	lb ai/a	B							
	NIS	0.25	% v/v	B							
	LSD (P=.05)				17.15	3.065	10.36	25.01	4.069	28.84	6.206
	Standard Deviation				11.13	1.990	6.72	16.23	2.641	18.72	4.028
	CV				59.03	22.23	24.67	68.35	20.21	75.34	25.49
	Bartlett's X2				24.985	2.675	0.326	4.417	17.751	0.417	8.537
	P(Bartlett's X2)				0.001*	0.614	0.85	0.22	0.001*	0.812	0.074
	Replicate F				1.032	1.284	0.101	0.435	0.787	0.162	1.656
	Replicate Prob(F)				0.4132	0.3243	0.9577	0.7321	0.5239	0.9200	0.2289
	Treatment F				14.442	19.371	92.171	8.478	36.006	14.749	16.667
	Treatment Prob(F)				0.0002	0.0001	0.0001	0.0017	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	22	23	24	25	26	27	28
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				OXAST	PLALA	PLAMA	POATR	TAROF	TRFRE	DACGL
	Pest Scientific Name				Oxalis stricta	Plantago lance>	Plantago major	Poa trivialis	Taraxacum offi>	Trifolium repe>	Dactylis glome>
	Pest Name				Common yellow >	Buckhorn plant>	Broadleaf plan>	Rough-stalk bl>	Common dandeli>	White clover	Orchard grass
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety				Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated				WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	PLANT -
	Rating Date				6/10/2011	6/10/2011	6/10/2011	6/10/2011	6/10/2011	6/10/2011	7/8/2011
	Rating Type				CONTROL	CONTROL	CONTROL	HEIGHT	CONTROL	CONTROL	HEIGHT
	Rating Unit				%	%	%	INCH	%	%	INCH
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				21 21	21 21	21 21	21 21	21 21	21 21	49 49
	Trt-Eval Interval				3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	7WAT
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 a	20.88 a	0.0 b	0.0 c	34.50 a
2	AIM+	0.0078	lb ai/a	B	18.8 b	6.3 b	37.3 a	16.13 a	11.3 b	25.0 bc	31.60 ab
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
3	AIM+	0.0156	lb ai/a	B	8.8 b	23.8 b	24.8 a	14.13 a	16.3 b	30.0 bc	29.63 b
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	88.5 a	63.8 a	67.3 a	5.83 b	61.3 a	67.5 ab	11.93 c
	AIM+	0.0078	lb ai/a	B							
	COC	2.5	% v/v	B							
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	92.0 a	70.0 a	75.0 a	3.83 b	68.8 a	76.3 a	6.45 d
	AIM+	0.0156	lb ai/a	B							
	NIS	0.25	% v/v	B							
	LSD (P=.05)				18.84	37.27	53.86	6.564	19.39	37.27	3.224
	Standard Deviation				12.23	24.19	34.95	4.260	12.58	24.19	2.092
	CV				29.39	73.87	85.57	35.05	39.95	60.85	9.17
	Bartlett's X2				4.231	11.291	2.773	17.123	4.265	7.472	11.711
	P(Bartlett's X2)				0.238	0.01*	0.428	0.002*	0.234	0.058	0.02*
	Replicate F				0.751	1.472	0.764	0.551	1.947	0.612	1.290
	Replicate Prob(F)				0.5425	0.2717	0.5358	0.6571	0.1759	0.6202	0.3226
	Treatment F				54.000	7.184	3.113	11.304	24.679	6.829	147.694
	Treatment Prob(F)				0.0001	0.0034	0.0566	0.0005	0.0001	0.0042	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code							
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				HIECA	LOLPE	OXAST	PLALA	PLALA	POATR	TAROF
	Pest Scientific Name				Hieracium caes>	Lolium perenne	Oxalis stricta	Plantago lance>	Plantago lance>	Poa trivialis	Taraxacum offi>
	Pest Name				Yellow hawkweed	Perennial ryeg>	Common yellow >	Buckhorn plant>	Buckhorn plant>	Rough-stalk bl>	Common dandeli>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Crop Variety				Paulared	Paulared	Paulared	Paulared	Paulared	Paulared	Paulared
	Part Rated				WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -
	Rating Date				7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011
	Rating Type				CONTROL	HEIGHT	CONTROL	CONTROL	CONTROL	HEIGHT	CONTROL
	Rating Unit				%	INCH	%	%	%	INCH	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				49 49	49 49	49 49	49 49	49 49	49 49	49 49
	Trt-Eval Interval				7WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT
					29	30	31	32	33	34	35
1	UNTREATED CONTROL				0.0 b	27.63 a	0.0 c	0.0 a	0.0 b	26.00 a	0.0 a
2	AIM+	0.0078	lb ai/a	B	27.3 ab	26.25 a	17.5 bc	17.5 a	25.0 ab	25.50 a	15.0 a
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
3	AIM+	0.0156	lb ai/a	B	0.0 b	25.50 a	11.3 bc	46.0 a	10.0 ab	25.50 a	22.5 a
	POAST+	0.117	lb ai/a	B							
	COC	2.5	% v/v	B							
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	76.8 a	5.13 b	44.8 ab	17.5 a	27.5 ab	3.25 b	35.0 a
	AIM+	0.0078	lb ai/a	B							
	COC	2.5	% v/v	B							
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	78.0 a	2.63 b	74.5 a	52.5 a	50.0 a	5.38 b	50.0 a
	AIM+	0.0156	lb ai/a	B							
	NIS	0.25	% v/v	B							
	LSD (P=.05)				52.15	5.266	32.02	39.54	30.94	4.527	33.82
	Standard Deviation				33.85	3.418	20.78	25.66	20.08	2.938	21.95
	CV				92.99	19.61	70.21	96.12	89.26	17.16	89.58
	Bartlett's X2				0.052	2.965	4.166	11.206	1.007	8.658	0.131
	P(Bartlett's X2)				0.974	0.564	0.244	0.011*	0.80	0.07	0.937
	Replicate F				1.284	1.074	2.935	2.674	2.426	1.210	0.619
	Replicate Prob(F)				0.3243	0.3968	0.0766	0.0945	0.1162	0.3482	0.6157
	Treatment F				5.317	52.859	8.347	2.916	3.595	63.663	3.021
	Treatment Prob(F)				0.0106	0.0001	0.0018	0.0673	0.0378	0.0001	0.0614

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type				W Weed
Pest Code				TRFRE
Pest Scientific Name				Trifolium repe>
Pest Name				White clover
Crop Code				MABSD
BBCH Scale				BPOM
Crop Scientific Name				Malus domestica
Crop Name				Apple
Crop Variety				Paulared
Part Rated				WEED -
Rating Date				7/8/2011
Rating Type				CONTROL
Rating Unit				%
Number of Subsamples				0
Days After First/Last Applic.				49 49
Trt-Eval Interval				7WAT
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	36
1	UNTREATED CONTROL				0.0 a
2	AIM+	0.0078	lb ai/a	B	0.0 a
	POAST+	0.117	lb ai/a	B	
	COC	2.5	% v/v	B	
3	AIM+	0.0156	lb ai/a	B	2.5 a
	POAST+	0.117	lb ai/a	B	
	COC	2.5	% v/v	B	
4	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	22.5 a
	AIM+	0.0078	lb ai/a	B	
	COC	2.5	% v/v	B	
5	ROUNDUP WEATHERMAX+	0.129	lb ai/a	B	12.5 a
	AIM+	0.0156	lb ai/a	B	
	NIS	0.25	% v/v	B	
LSD (P=.05)					36.27
Standard Deviation					23.54
CV					313.88
Bartlett's X2					8.806
P(Bartlett's X2)					0.012*
Replicate F					0.827
Replicate Prob(F)					0.5040
Treatment F					0.699
Treatment Prob(F)					0.6071

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - CHEMICAL MOWING WITH AIM TANK-MIXES

Trial ID: APPCHEMMOWAIMW 2011 Protocol ID: CARF.POME.11.JPR01
Location: Wooster, Ohio Study Director: Doug Doohan
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
DACGL, Dactylis glomerata, = US
HIECA, Hieracium caespitosum, = US
LOLPE, Lolium perenne, = US
OXAST, Oxalis stricta, = US
PLALA, Plantago lanceolata, = US
PLAMA, Plantago major, = US
POATR, Poa trivialis, = US
TAROF, Taraxacum officinale, = US
TRFRE, Trifolium repens, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
PLANT = plant
Rating Type
HEIGHT = height
Rating Unit
IN = inch
% = percent

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res. Assoc.
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster **Trial Status:** ONE-YEAR/INTERIM
State/Prov.: OH **Trial Reliability:** Reliable
Postal Code: 44691 **Initiation Date:** 5/5/2011
Country: USA

COOPERATOR/LANDOWNER

Cooperator: Fred Finney **Country:** USA
Org: Moreland Fruit Farm **Phone No:** 3302647194
Address 1: 1558 Moreland Rd.
City: Wooster
State/Prov: OH
Postal Code: 44691

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: The trial objectives are threefold:
1) To describe the weed control from the Alion treatments compared to the local standard treatments including the strengths and weaknesses.
2) To evaluate the length of control in months
3) Crop Tolerance

The protocol states Alion plus glyphosate (treatnment 4) and Alion plus glufosinate (or Rely), treatment 5 , are to be compared to a current standard treatment in our area , (Chateau at 9oz/A). which is treatment 8
Conclusions: The orchard trees had severe fireblight damage with the frequent spring rains; there was no visual herbicide injury.

The Alion treatments of main interest were Alion at 5 oz/A + glufosinate 55oz/A, (treatment #3) , and Alion at 5oz/a + glyphosate 1 qt/A (treatment #4). The orchard standard to which these 2 treatments were compared is treatment #8, (Chateau at 9 oz + Roundup at 1 qt/A).There were 24 weed species present in the trial.

Results indicate that at 120 days after treatment, Alion may provide a wider range of orchard weed control than Chateau. Using 80% or better as good weed control, both Alion treatments controlled more weed species than Chateau. Crabgrass and clover control were significantly increased with Alion over Chateau. Other weed species that had better control with Alion (though not significant) include bindweed, wild carrot, buckhorn plantain, virginia creeper, giant and yellow foxtail.The Alion/Rely treatment provided significantly higher control on poison ivy than Chateau, but Chateau had significantly better smartweed control over Alion/Roundup.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AGRASS	**An**	nual Grasses	varius spp.
2.	AMBEL	**Co**	mmon ragweed	Ambrosia artemisiifolia
3.	AMBTR	**Gi**	ant ragweed	Ambrosia trifida
4.	CAGSE	**Gr**	eat bindweed	Calystegia sepium
5.	CARHI	**Ha**	iry bittercress	Cardamine hirsuta
6.	CHEAL	**Co**	mmon lambsquarters	Chenopodium album
7.	CIRAR	**Ca**	nada thistle	Cirsium arvense
8.	CYPES	**Ye**	llow nutsedge	Cyperus esculentes
9.	DIGSA	**La**	rge crabgrass	Digitaria sanguinalis
10.	GLEHE	**Gr**	ound ivy	Glechoma hederacea
11.	MUHSC	**Ni**	mblewill	Muhlenbergia schreberi
12.	OXAST	**Co**	mmon yellow wood sorrel	Oxalis stricta
13.	PHTAM	**Co**	mmon pokeweed	Phytolacca americana
14.	PLALA	**Bu**	ckhorn plantain	Plantago lanceolata
15.	POLPY	**Pe**	nnsylvania smartweed	Persicaria pensylvanica
16.	PRTQU	**Vi**	rginia creeper	Parthenocissus quinquefolia
17.	RUBSS	**Bl**	ackberry	Rubus sp.
18.	RUMSS	**Do**	ck	Rumex sp.
19.	SETFA	**Gi**	ant foxtail	Setaria faberi
20.	SETPU	**ye**	llow foxtail	Setaria pumila
21.	SOOSS	**Go**	ldenrod	Solidago sp.
22.	TAROF	**Co**	mmon dandelion	Taraxacum officinale
23.	TOXRA	**Po**	ison-ivy	Toxicodendron radicans
24.	TRFRE	**Wh**	ite clover	Trifolium repens

Crop 1: MABSD APPLE **Variety:** PAULA RED
Planting Date: 5/15/1986 **Planting Method:** CONVENTIONAL
Perennial Age: 25 YEAR
Row Spacing: 15 FT **Spacing Within Row:** 15 FT

SITE AND DESIGN
Plot Width, Unit: 10 FT **Plot Length, Unit:** 15 FT **Reps:** 4
Site Type: FIELD
Tillage Type: NO-TILL **Study Design:** RACOBL

MAINTENANCE
Field Prep./Maintenance: Maintenance was done by Fred Finney and sons.

SOIL DESCRIPTION
% Sand: 16 **% OM:** 3.1 **Texture:** SILT LOAM
% Silt: 72 **pH:** 6 **Soil Name:** WOOSTER SILT LOAM
% Clay: 12 **CEC:** 14 **Fert. Level:** GOOD

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Overall Moisture Conditions: NORMAL
Closest Weather Station: OARDC **Distance:** 5 **Unit:** MI

APPLICATION DESCRIPTION

	A
Application Date:	5/5/2011
Time of Day:	2-3PM
Application Method:	SPRAY
Application Timing:	POST
Applic. Placement:	BRODIR
Air Temp., Unit:	67.6 F
% Relative Humidity:	42.5
Wind Velocity, Unit:	5.4 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	59.4 F
Soil Moisture:	MOIST
% Cloud Cover:	10

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	MABSD POST
Stage Scale:	BLOOM
Height, Unit:	20 FT

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRAS POST
Stage Scale:	2LF
Density, Unit:	4 M2
Weed 2 Code, Stage:	AMBEL POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed 3 Code, Stage:	AMBTR POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed 4 Code, Stage:	CAGSE POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed 5 Code, Stage:	CARHI POST
Stage Scale:	POSTBLOOM

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Density, Unit:	6 M2
Weed 6 Code, Stage:	CHEAL POST
Stage Scale:	2 IN
Density, Unit:	20 M2
Weed 7 Code, Stage:	CIRAR POST
Stage Scale:	4 IN
Density, Unit:	4 M2
Weed 8 Code, Stage:	CYPES POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed 9 Code, Stage:	DIGSA POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed10 Code, Stage:	GLEHE POST
Stage Scale:	BLOOM
Density, Unit:	10 M2
Weed11 Code, Stage:	MUHSC POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed12 Code, Stage:	OXAST POST
Stage Scale:	1.5 IN
Density, Unit:	15 M2
Weed13 Code, Stage:	PHTAM POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed14 Code, Stage:	PLALA POST
Stage Scale:	8 IN DIAM
Density, Unit:	20 M2
Weed15 Code, Stage:	POLPY POST
Stage Scale:	2-3 LF
Density, Unit:	20 M2
Weed16 Code, Stage:	PRTQU POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed17 Code, Stage:	RUBSS POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed18 Code, Stage:	RUMSS POST
Stage Scale:	NONE
Density, Unit:	0 M2

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed19 Code, Stage:	SETFA POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed20 Code, Stage:	SETPU POST
Stage Scale:	10 IN
Density, Unit:	2 M2
Weed21 Code, Stage:	SOOSS POST
Stage Scale:	8 IN
Density, Unit:	6 M2
Weed22 Code, Stage:	TAROF POST
Stage Scale:	BLOOM
Density, Unit:	6 M2
Weed23 Code, Stage:	TOXRA POST
Stage Scale:	NONE
Density, Unit:	0 M2
Weed24 Code, Stage:	TRFRE POST
Stage Scale:	3 IN DIAM
Density, Unit:	8 M2

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 SPRAY
Operating Pressure:	40
Nozzle Type:	TT JET
Nozzle Size:	J60-11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	WATER
Spray Volume, Unit:	25 GPA
Propellant:	CO2

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 10 by 15 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.5642)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	ROUNDUP WEATHERMAX+	5.5	SL	1.38	lb ai/a	POST	A	20.07 ml/mx	102	206	304	407
	AMS	100	SG	17	lb ai/a	POST	A	163.0 g/mx				
3	ALION+	1.67	SC	0.065	lb ai/a	POST	A	3.113 ml/mx	103	207	301	404
	RELY 280	2.33	SL	1.02	lb ai/a	POST	A	35.02 ml/mx				
4	ALION+	1.67	SC	0.065	lb ai/a	POST	A	3.113 ml/mx	104	208	305	406
	ROUNDUP WEATHERMAX+	5.5	SL	1.38	lb ai/a	POST	A	20.07 ml/mx				
	AMS	100	G	2.8	lb ai/a	POST	A	4.373 g/1 pl				
5	ALION+	1.67	SC	0.065	lb ai/a	POST	A	3.113 ml/mx	105	201	303	405
	RELY 280+	2.33	SL	1.02	lb ai/a	POST	A	35.02 ml/mx				
	ROUNDUP WEATHERMAX+	5.5	SL	1.38	lb ai/a	POST	A	20.07 ml/mx				
	AMS	100	G	2.8	lb ai/a	POST	A	4.373 g/1 pl				
6	RELY 280+	2.33	SL	1.02	lb ai/a	POST	A	35.02 ml/mx	106	203	302	408
	MATRIX	25	WG	0.0625	lb ai/a	POST	A	2.397 g/mx				
7	ALION+	1.67	SC	0.065	lb ai/a	POST	A	3.113 ml/mx	107	204	306	402
	RELY 280+	2.33	SL	1.02	lb ai/a	POST	A	35.02 ml/mx				
	MATRIX	25	WG	0.0313	lb ai/a	POST	A	1.2 g/mx				
8	CHATEAU+	51	WDG	0.287	lb ai/a	POST	A	5.395 g/mx	108	202	308	401
	ROUNDUP WEATHERMAX	5.5	SL	1.38	lb ai/a	POST	A	20.07 ml/mx				
9	SINBAR	80	WP	1.6	lb ai/a	POST	A	19.17 g/mx	109	209	309	409
10	SINBAR	80	WDG	1.6	lb ai/a	POST	A	19.17 g/mx	110	210	310	410

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 10 by 15 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.5642)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	205	307	403

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
75.265	ml	ROUNDUP WEATHERMAX+	5.5	SL	
203.704	g	AMS	100	SG	
15.567	ml	ALION+	1.67	SC	
43.772	ml	RELY 280	2.33	SL	
43.735	g	AMS	100	G	
131.316	ml	RELY 280+	2.33	SL	
4.496	g	MATRIX	25	WG	
6.743	g	CHATEAU+	51	WDG	
25.088	ml	ROUNDUP WEATHERMAX	5.5	SL	
23.965	g	SINBAR	80	WP	
23.965	g	SINBAR	80	WDG	

* 'Per area' calculations based on 4 replicates of 10 by 15 feet 'Plot' experimental units (area of one treatment).
* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	8	402	7	403	1	404	3	405	5	406	4	407	2	408	6	409	9	410	10
3	3	301	3	302	6	303	5	304	2	305	4	306	7	307	1	308	8	309	9	310	10
2	2	201	5	202	8	203	6	204	7	205	1	206	2	207	3	208	4	209	9	210	10
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					APPLE	AGRASS	AMBEL	AMBTR	CAGSE	CARHI	CIRAR	CYPES	GLEHE	OXAST	PHTAM
	Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated					TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011
	Trt-Eval Interval					30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
	# Subsamples, Dec.					- 0	- 0									
1	UNTREATED CONTROL				101	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	0	80	99.0	99.0	90.0	99.0	99.0	99.0	99.0	70.0	0.0
	AMS	17	lb ai/a	A	206	0	20	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					304	0	20	99.0	80.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					407	0	20	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0	35	99.0	94.3	96.8	99.0	99.0	99.0	74.3	91.8	74.3
3	ALION+	0.065	lb ai/a	A	103	0	95	99.0	95.0	95.0	99.0	99.0	99.0	95.0	80.0	99.0
	RELY 280	1.02	lb ai/a	A	207	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					301	0	0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	20.0
					404	0	85	99.0	99.0	99.0	99.0	99.0	99.0	99.0	90.0	99.0
					Mean =	0	70	99.0	98.0	98.0	99.0	99.0	99.0	98.0	67.3	79.3
4	ALION+	0.065	lb ai/a	A	104	0	99	99.0	99.0	99.0	99.0	99.0	30.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	0	70	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	305	0	70	99.0	99.0	99.0	99.0	99.0	99.0	99.0	50.0	50.0
					406	0	80	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0	80	99.0	99.0	99.0	99.0	99.0	81.8	99.0	86.8	86.8
5	ALION+	0.065	lb ai/a	A	105	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	0	99	99.0	99.0	99.0	99.0	95.0	99.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	0	80	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	405	0	95	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0	93	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0
6	RELY 280+	1.02	lb ai/a	A	106	0	80	99.0	99.0	99.0	99.0	99.0	95.0	99.0	95.0	0.0
	MATRIX	0.0625	lb ai/a	A	203	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					302	0	85	99.0	99.0	99.0	99.0	99.0	99.0	99.0	30.0	99.0
					408	0	75	99.0	99.0	99.0	99.0	99.0	99.0	99.0	70.0	99.0
					Mean =	0	85	99.0	99.0	99.0	99.0	99.0	98.0	99.0	73.5	74.3

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					APPLE	AGRASS	AMBEL	AMBTR	CAGSE	CARHI	CIRAR	CYPES	GLEHE	OXAST	PHTAM
	Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated					TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011
	Trt-Eval Interval					30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
	# Subsamples, Dec.					- 0	- 0									
7	ALION+	0.065	lb ai/a	A	107	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	0	90	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	0	50	99.0	99.0	99.0	99.0	99.0	90.0	50.0	90.0	50.0
					402	0	99	99.0	99.0	80.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0	85	99.0	99.0	94.3	99.0	99.0	96.8	86.8	96.8	86.8
8	CHATEAU+	0.287	lb ai/a	A	108	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	0	90	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
					308	0	99	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0	99.0
					401	0	99	99.0	99.0	80.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0	97	99.0	99.0	94.3	99.0	86.8	86.8	99.0	99.0	99.0
9	SINBAR	1.6	lb ai/a	A	109	0	99	99.0	99.0	99.0	99.0	70.0	99.0	99.0	99.0	99.0
					209	0	75	99.0	99.0	99.0	99.0	99.0	99.0	99.0	20.0	99.0
					309	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					409	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	20.0	99.0
					Mean =	0	93	99.0	99.0	99.0	99.0	91.8	99.0	99.0	59.5	99.0
10	SINBAR	1.6	lb ai/a	A	110	0	99	99.0	99.0	99.0	99.0	40.0	99.0	99.0	90.0	99.0
					210	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					310	0	99	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					410	0	99	99.0	99.0	99.0	99.0	99.0	95.0	99.0	99.0	99.0
					Mean =	0	99	99.0	99.0	99.0	99.0	84.3	98.0	99.0	96.8	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PLALA APPLE WEED - CONTROL % 6/6/2011 30DAT	POLPY APPLE WEED - CONTROL % 6/6/2011 30DAT	PRTQU APPLE WEED - CONTROL % 6/6/2011 30DAT	RUBSS APPLE WEED - CONTROL % 6/6/2011 30DAT	RUMSS APPLE WEED - CONTROL % 6/6/2011 30DAT	TAROF APPLE WEED - CONTROL % 6/6/2011 30DAT	TOXRA APPLE WEED - CONTROL % 6/6/2011 30DAT	TRFRE APPLE WEED - CONTROL % 6/6/2011 30DAT - 0	APPLE TREE - INJURY % 7/6/2011 60DAT - 0	AMBEL APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	AMBTR APPLE WEED - CONTROL % 7/6/2011 60DAT - 0
						12	13	14	15	16	17	18	19	20	21	22
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	99.0	0.0	99.0	99.0	85.0	90.0	99.0	99	0	0	99
	AMS	17	lb ai/a	A	206	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	0	99
					304	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99	0	0	99
					407	99.0	99.0	99.0	99.0	99.0	85.0	99.0	99	0	0	99
					Mean =	99.0	74.3	99.0	99.0	95.5	81.0	99.0	99	0	0	99
3	ALION+	0.065	lb ai/a	A	103	99.0	99.0	99.0	95.0	95.0	0.0	99.0	99	0	99	99
	RELY 280	1.02	lb ai/a	A	207	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					301	99.0	99.0	20.0	99.0	99.0	99.0	99.0	99	0	99	99
					404	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	99.0	99.0	79.3	98.0	98.0	74.3	99.0	99	0	99	99
4	ALION+	0.065	lb ai/a	A	104	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	70
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	0	99
	AMS	2.8	lb ai/a	A	305	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					406	99.0	99.0	99.0	99.0	99.0	60.0	99.0	99	0	99	99
					Mean =	99.0	99.0	99.0	99.0	99.0	89.3	99.0	99	0	74	92
5	ALION+	0.065	lb ai/a	A	105	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99	0	99	70
	RELY 280+	1.02	lb ai/a	A	201	99.0	99.0	0.0	99.0	99.0	99.0	60.0	99	0	99	99
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99.0	99.0	20.0	99.0	99.0	99.0	99.0	99	0	99	99
	AMS	2.8	lb ai/a	A	405	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	99.0	99.0	54.5	99.0	99.0	99.0	64.5	99	0	99	92
6	RELY 280+	1.02	lb ai/a	A	106	90.0	99.0	99.0	99.0	20.0	99.0	0.0	99	0	99	99
	MATRIX	0.0625	lb ai/a	A	203	40.0	99.0	20.0	99.0	99.0	99.0	99.0	99	0	80	99
					302	20.0	99.0	10.0	99.0	70.0	99.0	99.0	99	0	99	99
					408	89.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	59.8	99.0	57.0	99.0	72.0	99.0	74.3	99	0	94	99

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Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PLALA APPLE WEED - CONTROL % 6/6/2011 30DAT	POLPY APPLE WEED - CONTROL % 6/6/2011 30DAT	PRTQU APPLE WEED - CONTROL % 6/6/2011 30DAT	RUBSS APPLE WEED - CONTROL % 6/6/2011 30DAT	RUMSS APPLE WEED - CONTROL % 6/6/2011 30DAT	TAROF APPLE WEED - CONTROL % 6/6/2011 30DAT	TOXRA APPLE WEED - CONTROL % 6/6/2011 30DAT	TRFRE APPLE WEED - CONTROL % 6/6/2011 30DAT - 0	APPLE TREE - INJURY % 7/6/2011 60DAT - 0	AMBEL APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	AMBTR APPLE WEED - CONTROL % 7/6/2011 60DAT - 0
						12	13	14	15	16	17	18	19	20	21	22
7	ALION+	0.065	lb ai/a	A	107	99.0	99.0	99.0	99.0	60.0	99.0	0.0	99	0	99	99
	RELY 280+	1.02	lb ai/a	A	204	99.0	99.0	50.0	99.0	99.0	99.0	40.0	99	0	99	99
	MATRIX	0.0313	lb ai/a	A	306	99.0	99.0	30.0	99.0	99.0	99.0	70.0	99	0	0	99
					402	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	99.0	99.0	69.5	99.0	89.3	99.0	52.3	99	0	74	99
8	CHATEAU+	0.287	lb ai/a	A	108	99.0	99.0	99.0	99.0	95.0	99.0	20.0	99	0	99	99
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	70.0	99.0	99.0	99.0	99.0	99.0	50.0	99	0	99	99
					308	99.0	99.0	0.0	99.0	0.0	99.0	99.0	99	0	99	99
					401	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	91.8	99.0	74.3	99.0	73.3	99.0	67.0	99	0	99	99
9	SINBAR	1.6	lb ai/a	A	109	99.0	99.0	60.0	99.0	95.0	99.0	60.0	99	0	99	99
					209	20.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					309	99.0	99.0	99.0	99.0	95.0	99.0	60.0	99	0	99	99
					409	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					Mean =	79.3	99.0	89.3	99.0	97.0	99.0	79.5	99	0	99	99
10	SINBAR	1.6	lb ai/a	A	110	70.0	99.0	25.0	99.0	95.0	99.0	99.0	99	0	99	99
					210	99.0	99.0	20.0	99.0	99.0	99.0	99.0	99	0	99	50
					310	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99	0	99	99
					410	99.0	99.0	20.0	99.0	99.0	99.0	10.0	99	0	99	70
					Mean =	91.8	99.0	41.0	99.0	98.0	99.0	76.8	99	0	99	80

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Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	CAGSE APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	CARHI APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	CIRAR APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	CYPES APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	DAUCA APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	GLEHE APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	OXAST APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	PHTAM APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	PLALA APPLE WEED - CONTROL % 7/6/2011 60DAT - 0	POAAN APPLE WEED - CONTROL % 7/6/2011 60DAT - 0
						23	24	25	26	27	28	29	30	31	32
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					205	0	0	0	0	0	0	0	0	0	0
					307	0	0	0	0	0	0	0	0	0	0
					403	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	0	99	99	99	99	0	0	0	0	0
	AMS	17	lb ai/a	A	206	99	99	99	99	99	0	99	99	99	99
					304	99	99	99	99	99	0	0	99	99	99
					407	99	99	99	99	99	0	99	99	99	99
					Mean =	74	99	99	99	99	0	50	74	74	74
3	ALION+	0.065	lb ai/a	A	103	99	99	99	99	99	0	0	99	99	99
	RELY 280	1.02	lb ai/a	A	207	99	99	99	99	0	99	0	99	99	99
					301	99	99	0	99	99	99	0	0	99	99
					404	99	99	99	99	99	95	0	99	99	99
					Mean =	99	99	74	99	74	73	0	74	99	99
4	ALION+	0.065	lb ai/a	A	104	99	99	99	99	0	99	99	0	99	99
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99	99	99	99	99	0	99	99	99	99
	AMS	2.8	lb ai/a	A	305	99	99	99	99	0	99	99	0	99	99
					406	99	99	99	99	99	0	0	99	99	99
					Mean =	99	99	99	99	50	50	74	50	99	99
5	ALION+	0.065	lb ai/a	A	105	99	99	99	99	99	0	99	99	99	99
	RELY 280+	1.02	lb ai/a	A	201	99	99	85	99	99	95	99	99	99	99
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99	99	99	99	99	99	99	0	99	99
	AMS	2.8	lb ai/a	A	405	99	99	99	99	85	85	90	99	99	99
					Mean =	99	99	96	99	96	70	97	74	99	99
6	RELY 280+	1.02	lb ai/a	A	106	99	99	99	99	99	0	99	0	99	99
	MATRIX	0.0625	lb ai/a	A	203	99	99	99	99	99	99	99	99	0	99
					302	99	99	99	99	99	99	0	99	0	99
					408	99	99	99	99	0	0	99	99	70	99
					Mean =	99	99	99	99	74	50	74	74	42	99

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Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					CAGSE	CARHI	CIRAR	CYPES	DAUCA	GLEHE	OXAST	PHTAM	PLALA	POAAN
Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%
Rating Date					7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011
Trt-Eval Interval					60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	23	24	25	26	27	28	29	30	31	32
7	ALION+	0.065	lb ai/a	A	107	99	99	99	99	99	99	99	99	99	99
	RELY 280+	1.02	lb ai/a	A	204	99	99	99	99	99	99	70	99	99	99
	MATRIX	0.0313	lb ai/a	A	306	99	99	99	0	99	99	0	0	99	99
					402	99	99	99	99	20	99	90	99	99	99
					Mean =	99	99	99	74	79	99	65	74	99	99
8	CHATEAU+	0.287	lb ai/a	A	108	99	99	99	99	99	0	99	50	99	99
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	99	99	99	99	85	99	99	99	99	99
					308	99	99	0	0	99	99	0	99	99	99
					401	99	99	99	99	99	0	99	99	99	99
					Mean =	99	99	74	74	96	50	74	87	99	99
9	SINBAR	1.6	lb ai/a	A	109	99	99	95	99	99	90	99	99	99	99
					209	99	99	99	99	99	0	99	99	0	99
					309	99	99	95	99	99	99	99	99	99	99
					409	99	99	99	99	99	0	0	99	99	99
					Mean =	99	99	97	99	99	47	74	99	74	99
10	SINBAR	1.6	lb ai/a	A	110	99	99	60	99	99	99	0	99	99	99
					210	99	99	99	99	99	80	99	99	99	99
					310	99	99	60	99	99	99	0	99	99	99
					410	99	99	99	99	99	99	99	99	50	99
					Mean =	99	99	80	99	99	94	50	99	87	99

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Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	33	34	35	36	37	38	39	40	41	42	43
	Weed Code					POLPY	RUBSS	RUMSS	SETFA	SETPU	TAROF	TRFRE	TAROF	VACRE		AMBEL
	Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	WEED -
	Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	8/6/2011	8/6/2011
	Trt-Eval Interval					60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	90DAT	90DAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0		
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0.0	0.0
					205	0	0	0	0	0	0	0	0	0	0.0	0.0
					307	0	0	0	0	0	0	0	0	0	0.0	0.0
					403	0	0	0	0	0	0	0	0	0	0.0	0.0
					Mean =	0	0	0	0	0	0	0	0	0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	0	0	0	99	99	0	0	0	0	0.0	0.0
	AMS	17	lb ai/a	A	206	99	99	99	0	0	99	0	99	99	0.0	15.0
					304	0	99	99	0	0	99	99	99	0	0.0	20.0
					407	99	99	99	0	0	99	99	99	99	0.0	0.0
					Mean =	50	74	74	25	25	74	50	74	50	0.0	8.8
3	ALION+	0.065	lb ai/a	A	103	99	99	0	99	0	99	99	99	99	0.0	99.0
	RELY 280	1.02	lb ai/a	A	207	99	99	99	99	99	99	99	99	99	0.0	99.0
					301	99	99	99	99	99	0	0	0	0	0.0	99.0
					404	99	99	99	99	95	99	99	99	99	0.0	99.0
					Mean =	99	99	74	99	73	74	74	74	74	0.0	99.0
4	ALION+	0.065	lb ai/a	A	104	99	99	99	99	99	99	99	99	99	0.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99	99	99	0	0	99	99	99	0	0.0	50.0
	AMS	2.8	lb ai/a	A	305	99	99	99	99	99	99	99	99	0	0.0	99.0
					406	99	99	99	99	0	99	80	99	99	0.0	99.0
					Mean =	99	99	99	74	50	99	94	99	50	0.0	86.8
5	ALION+	0.065	lb ai/a	A	105	99	99	70	99	0	99	99	99	99	0.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	99	99	99	95	95	99	99	99	99	0.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99	99	99	99	99	99	99	99	0	0.0	99.0
	AMS	2.8	lb ai/a	A	405	99	99	99	99	85	99	99	99	99	0.0	99.0
					Mean =	99	99	92	98	70	99	99	99	74	0.0	99.0
6	RELY 280+	1.02	lb ai/a	A	106	99	99	50	99	0	99	99	99	99	0.0	30.0
	MATRIX	0.0625	lb ai/a	A	203	99	99	99	99	99	99	99	99	99	0.0	40.0
					302	99	99	0	99	99	99	99	99	0	0.0	99.0
					408	99	99	99	99	0	99	99	99	99	0.0	99.0
					Mean =	99	99	62	99	50	99	99	99	74	0.0	67.0

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	33	34	35	36	37	38	39	40	41	42	43
	Weed Code					POLPY	RUBSS	RUMSS	SETFA	SETPU	TAROF	TRFRE	TAROF	VACRE		AMBEL
	Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	WEED -
	Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	8/6/2011	8/6/2011
	Trt-Eval Interval					60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	90DAT	90DAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0		
7	ALION+	0.065	lb ai/a	A	107	99	99	0	99	99	99	99	99	99	0.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	99	99	99	99	99	99	99	99	75	0.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	99	99	99	99	99	99	99	99	0	0.0	99.0
					402	99	99	99	99	99	99	99	99	90	0.0	99.0
					Mean =	99	99	74	99	99	99	99	99	66	0.0	99.0
8	CHATEAU+	0.287	lb ai/a	A	108	99	99	99	99	0	99	99	99	99	0.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	99	99	99	99	99	99	90	99	99	0.0	99.0
					308	99	99	0	99	99	99	99	99	0	0.0	99.0
					401	99	99	99	0	0	99	99	99	99	0.0	99.0
					Mean =	99	99	74	74	50	99	97	99	74	0.0	99.0
9	SINBAR	1.6	lb ai/a	A	109	99	75	85	90	99	99	99	99	70	0.0	99.0
					209	99	99	99	0	0	99	99	99	99	0.0	99.0
					309	99	75	85	99	99	99	99	99	70	0.0	99.0
					409	99	99	99	0	0	0	99	0	99	0.0	99.0
					Mean =	99	87	92	47	50	74	99	74	85	0.0	99.0
10	SINBAR	1.6	lb ai/a	A	110	99	99	99	99	99	99	99	99	99	0.0	99.0
					210	99	99	99	99	99	99	99	99	0	0.0	80.0
					310	99	99	99	99	99	99	99	99	99	0.0	90.0
					410	99	99	99	99	99	50	99	50	0	0.0	99.0
					Mean =	99	99	99	99	99	87	99	87	50	0.0	92.0

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					AMBTR	CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE	MUHSC	OXAST	PHTAM
Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%
Rating Date					8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
Trt-Eval Interval					90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
# Subsamples, Dec.														
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	44	45	46	47	48	49	50	51	52	53
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.8	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	0.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0	0.0
	AMS	17	lb ai/a	A	206	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0	99.0
					304	99.0	99.0	99.0	99.0	20.0	0.0	99.0	99.0	99.0	99.0
					407	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0	99.0
					Mean =	74.3	99.0	99.0	99.0	79.3	0.0	24.8	99.0	99.0	74.3
3	ALION+	0.065	lb ai/a	A	103	99.0	99.0	99.0	0.0	50.0	99.0	0.0	99.0	99.0	0.0
	RELY 280	1.02	lb ai/a	A	207	99.0	99.0	99.0	99.0	95.0	99.0	99.0	95.0	95.0	99.0
					301	99.0	99.0	0.0	99.0	99.0	99.0	99.0	0.0	0.0	0.0
					404	99.0	99.0	99.0	99.0	80.0	99.0	85.0	99.0	99.0	99.0
					Mean =	99.0	99.0	74.3	74.3	81.0	99.0	70.8	73.3	73.3	49.5
4	ALION+	0.065	lb ai/a	A	104	99.0	99.0	99.0	0.0	70.0	99.0	85.0	60.0	60.0	0.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99.0	99.0	99.0	99.0	99.0	99.0	85.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	305	99.0	99.0	99.0	99.0	20.0	99.0	99.0	99.0	99.0	0.0
					406	99.0	99.0	99.0	99.0	99.0	99.0	80.0	99.0	0.0	99.0
					Mean =	99.0	99.0	99.0	74.3	72.0	99.0	87.3	89.3	64.5	49.5
5	ALION+	0.065	lb ai/a	A	105	99.0	99.0	99.0	99.0	40.0	99.0	0.0	80.0	80.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	99.0	99.0	99.0	99.0	99.0	99.0	99.0	85.0	85.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99.0	99.0	99.0	99.0	99.0	0.0	99.0	0.0	0.0	0.0
	AMS	2.8	lb ai/a	A	405	99.0	99.0	99.0	99.0	85.0	99.0	85.0	99.0	99.0	99.0
					Mean =	99.0	99.0	99.0	99.0	80.8	74.3	70.8	66.0	66.0	74.3
6	RELY 280+	1.02	lb ai/a	A	106	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0
	MATRIX	0.0625	lb ai/a	A	203	99.0	99.0	99.0	99.0	99.0	99.0	70.0	99.0	99.0	99.0
					302	99.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0
					408	99.0	99.0	99.0	99.0	8.0	99.0	0.0	99.0	50.0	99.0
					Mean =	99.0	99.0	99.0	99.0	76.3	99.0	42.3	74.3	62.0	74.3

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	AMBTR	CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE	MUHSC	OXAST	PHTAM
	Weed Code					AMBTR	CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE	MUHSC	OXAST	PHTAM
	Crop Code					APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated					WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED
	Rating Data Type					-	-	-	-	-	-	-	-	-	-
	Rating Unit					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Date					%	%	%	%	%	%	%	%	%	%
	Trt-Eval Interval					8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	# Subsamples, Dec.					90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
						44	45	46	47	48	49	50	51	52	53
7	ALION+	0.065	lb ai/a	A	107	99.0	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	99.0	99.0	99.0	99.0	99.0	99.0	99.0	60.0	60.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	99.0	99.0	99.0	0.0	99.0	70.0	99.0	0.0	99.0	0.0
					402	99.0	70.0	99.0	99.0	60.0	90.0	85.0	80.0	80.0	99.0
					Mean =	99.0	91.8	99.0	74.3	89.3	89.5	83.3	59.8	84.5	74.3
8	CHATEAU+	0.287	lb ai/a	A	108	99.0	99.0	99.0	99.0	99.0	99.0	0.0	95.0	99.0	0.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	99.0	99.0	99.0	99.0	99.0	99.0	70.0	60.0	60.0	99.0
					308	99.0	99.0	0.0	15.0	99.0	99.0	0.0	99.0	99.0	0.0
					401	99.0	40.0	99.0	99.0	75.0	99.0	99.0	0.0	0.0	99.0
					Mean =	99.0	84.3	74.3	78.0	93.0	99.0	42.3	63.5	64.5	49.5
9	SINBAR	1.6	lb ai/a	A	109	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	99.0	99.0
					209	99.0	99.0	99.0	99.0	99.0	0.0	50.0	99.0	99.0	99.0
					309	99.0	99.0	0.0	0.0	99.0	0.0	99.0	65.0	80.0	99.0
					409	99.0	99.0	99.0	99.0	99.0	0.0	0.0	0.0	50.0	99.0
					Mean =	99.0	99.0	74.3	74.3	99.0	0.0	62.0	65.8	82.0	99.0
10	SINBAR	1.6	lb ai/a	A	110	99.0	99.0	40.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					210	99.0	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
					310	99.0	0.0	80.0	99.0	65.0	99.0	99.0	99.0	0.0	99.0
					410	99.0	99.0	99.0	99.0	0.0	99.0	0.0	99.0	0.0	99.0
					Mean =	99.0	74.3	79.5	99.0	65.8	99.0	62.0	99.0	49.5	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PLALA APPLE WEED - CONTROL % 8/6/2011 90DAT	POAAN APPLE WEED - CONTROL % 8/6/2011 90DAT	POLPY APPLE WEED - CONTROL % 8/6/2011 90DAT	PRTQU APPLE WEED - CONTROL % 8/6/2011 90DAT	RUBSS APPLE WEED - CONTROL % 8/6/2011 90DAT	RUMSS APPLE WEED - CONTROL % 8/6/2011 90DAT	SETFA APPLE WEED - CONTROL % 8/6/2011 90DAT	SETPU APPLE WEED - CONTROL % 8/6/2011 90DAT	SOOSS APPLE WEED - CONTROL % 8/6/2011 90DAT	TAROF APPLE WEED - CONTROL % 8/6/2011 90DAT
						54	55	56	57	58	59	60	61	62	63
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
	AMS	17	lb ai/a	A	206	99.0	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0
					304	99.0	99.0	0.0	0.0	99.0	99.0	0.0	0.0	99.0	99.0
					407	99.0	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0
					Mean =	99.0	99.0	49.5	49.5	99.0	99.0	24.8	24.8	99.0	99.0
3	ALION+	0.065	lb ai/a	A	103	99.0	99.0	99.0	0.0	99.0	0.0	99.0	0.0	99.0	99.0
	RELY 280	1.02	lb ai/a	A	207	99.0	99.0	95.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					301	99.0	99.0	0.0	0.0	99.0	0.0	99.0	99.0	99.0	99.0
					404	99.0	99.0	99.0	85.0	99.0	99.0	99.0	85.0	30.0	99.0
					Mean =	99.0	99.0	73.3	46.0	99.0	49.5	99.0	70.8	81.8	99.0
4	ALION+	0.065	lb ai/a	A	104	99.0	99.0	99.0	99.0	99.0	99.0	99.0	85.0	99.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99.0	99.0	99.0	50.0	99.0	99.0	85.0	0.0	99.0	99.0
	AMS	2.8	lb ai/a	A	305	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
					406	99.0	99.0	99.0	0.0	99.0	99.0	99.0	80.0	99.0	99.0
					Mean =	99.0	99.0	74.3	37.3	99.0	99.0	95.5	66.0	99.0	99.0
5	ALION+	0.065	lb ai/a	A	105	99.0	99.0	99.0	99.0	99.0	75.0	99.0	0.0	30.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	99.0	99.0	99.0	99.0	99.0	99.0	95.0	95.0	50.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99.0	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	405	99.0	99.0	99.0	60.0	99.0	99.0	99.0	85.0	50.0	99.0
					Mean =	99.0	99.0	99.0	64.5	99.0	93.0	98.0	69.8	57.3	99.0
6	RELY 280+	1.02	lb ai/a	A	106	99.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	MATRIX	0.0625	lb ai/a	A	203	0.0	99.0	99.0	99.0	99.0	99.0	99.0	70.0	60.0	99.0
					302	0.0	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
					408	0.0	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0
					Mean =	24.8	99.0	99.0	74.3	99.0	99.0	74.3	42.3	89.3	99.0

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PLALA APPLE WEED - CONTROL % 8/6/2011 90DAT	POAAN APPLE WEED - CONTROL % 8/6/2011 90DAT	POLPY APPLE WEED - CONTROL % 8/6/2011 90DAT	PRTQU APPLE WEED - CONTROL % 8/6/2011 90DAT	RUBSS APPLE WEED - CONTROL % 8/6/2011 90DAT	RUMSS APPLE WEED - CONTROL % 8/6/2011 90DAT	SETFA APPLE WEED - CONTROL % 8/6/2011 90DAT	SETPU APPLE WEED - CONTROL % 8/6/2011 90DAT	SOOSS APPLE WEED - CONTROL % 8/6/2011 90DAT	TAROF APPLE WEED - CONTROL % 8/6/2011 90DAT
						54	55	56	57	58	59	60	61	62	63
7	ALION+	0.065	lb ai/a	A	107	99.0	99.0	99.0	99.0	99.0	50.0	99.0	50.0	99.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	99.0	99.0	99.0	50.0	99.0	99.0	99.0	99.0	80.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	99.0	99.0	99.0	0.0	99.0	50.0	99.0	99.0	99.0	99.0
					402	99.0	99.0	99.0	80.0	99.0	99.0	99.0	99.0	95.0	99.0
					Mean =	99.0	99.0	99.0	57.3	99.0	74.5	99.0	86.8	93.3	99.0
8	CHATEAU+	0.287	lb ai/a	A	108	99.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	99.0	99.0	99.0	0.0	99.0	99.0	99.0	70.0	70.0	99.0
					308	99.0	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
					401	99.0	99.0	99.0	65.0	99.0	99.0	0.0	0.0	99.0	99.0
					Mean =	99.0	99.0	99.0	41.0	99.0	99.0	74.3	42.3	91.8	99.0
9	SINBAR	1.6	lb ai/a	A	109	99.0	99.0	99.0	50.0	50.0	99.0	90.0	99.0	99.0	99.0
					209	99.0	99.0	99.0	99.0	99.0	99.0	50.0	0.0	99.0	99.0
					309	99.0	99.0	99.0	80.0	50.0	99.0	50.0	50.0	50.0	99.0
					409	99.0	99.0	99.0	0.0	99.0	99.0	0.0	0.0	99.0	99.0
					Mean =	99.0	99.0	99.0	57.3	74.5	99.0	47.5	37.3	86.8	99.0
10	SINBAR	1.6	lb ai/a	A	110	99.0	99.0	99.0	99.0	99.0	70.0	99.0	99.0	99.0	99.0
					210	99.0	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
					310	99.0	99.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
					410	99.0	99.0	99.0	90.0	99.0	99.0	0.0	99.0	99.0	99.0
					Mean =	99.0	99.0	99.0	96.8	99.0	91.8	49.8	99.0	99.0	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	TOXRA APPLE WEED - CONTROL % 8/6/2011 90DAT 64	TRFRE APPLE WEED - CONTROL % 8/6/2011 90DAT 65	APPLE TREE - INJURY % 9/5/2011 120DAT 66	AMBEL APPLE WEED - CONTROL % 9/5/2011 120DAT 67	AMBTR APPLE WEED - CONTROL % 9/5/2011 120DAT 68	CAGSE APPLE WEED - CONTROL % 9/5/2011 120DAT 69	CIRAR APPLE WEED - CONTROL % 9/5/2011 120DAT 70	CYPES APPLE WEED - CONTROL % 9/5/2011 120DAT 71	DAUCA APPLE WEED - CONTROL % 9/5/2011 120DAT 72	DIGSA APPLE WEED - CONTROL % 9/5/2011 120DAT 73	GLEHE APPLE WEED - CONTROL % 9/5/2011 120DAT 74
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
	AMS	17	lb ai/a	A	206	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					304	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					407	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					Mean =	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
3	ALION+	0.065	lb ai/a	A	103	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	80.0	85.0	85.0
	RELY 280	1.02	lb ai/a	A	207	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	75.0	90.0	99.0
					301	99.0	99.0	0.0	99.0	99.0	99.0	0.0	99.0	70.0	85.0	0.0
					404	85.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	90.0	99.0
					Mean =	95.5	99.0	0.0	99.0	99.0	99.0	74.3	99.0	81.0	87.5	70.8
4	ALION+	0.065	lb ai/a	A	104	99.0	99.0	0.0	99.0	99.0	99.0	99.0	0.0	80.0	99.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	0.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	90.0	99.0
	AMS	2.8	lb ai/a	A	305	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	50.0	85.0	99.0
					406	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	85.0	99.0
					Mean =	24.8	99.0	0.0	74.3	99.0	99.0	99.0	74.3	82.0	89.8	99.0
5	ALION+	0.065	lb ai/a	A	105	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	95.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	60.0	99.0	0.0	99.0	99.0	99.0	50.0	99.0	99.0	95.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99.0	99.0	0.0	99.0	95.0	99.0	99.0	99.0	99.0	0.0	0.0
	AMS	2.8	lb ai/a	A	405	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	85.0	90.0	99.0
					Mean =	39.8	99.0	0.0	99.0	98.0	99.0	86.8	99.0	95.5	70.0	74.3
6	RELY 280+	1.02	lb ai/a	A	106	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	70.0	99.0
	MATRIX	0.0625	lb ai/a	A	203	0.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					302	99.0	99.0	0.0	99.0	0.0	99.0	99.0	99.0	99.0	70.0	99.0
					408	99.0	99.0	0.0	70.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					Mean =	49.5	99.0	0.0	67.0	74.3	99.0	99.0	99.0	99.0	35.0	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code						TOXRA	TRFRE		AMBEL	AMBTR	CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE
Crop Code						APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated						WEED -	WEED -	TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type						CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%	%	%	%	%	%
Rating Date						8/6/2011	8/6/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011
Trt-Eval Interval						90DAT	90DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT
# Subsamples, Dec.																
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	64	65	66	67	68	69	70	71	72	73	74
7	ALION+	0.065	lb ai/a	A	107	0.0	99.0	0.0	99.0	0.0	99.0	99.0	99.0	0.0	85.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	70.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	99.0	99.0	0.0	0.0	0.0	99.0	99.0	0.0	99.0	70.0	0.0
					402	99.0	99.0	0.0	99.0	99.0	70.0	99.0	99.0	99.0	90.0	99.0
					Mean =	49.5	99.0	0.0	74.3	49.5	91.8	99.0	74.3	74.3	78.8	74.3
8	CHATEAU+	0.287	lb ai/a	A	108	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	50.0	85.0	0.0	99.0	99.0	99.0	99.0	99.0	70.0	0.0	99.0
					308	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	75.0	0.0	99.0
					401	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	30.0	0.0	99.0
					Mean =	62.0	95.5	0.0	99.0	99.0	74.3	99.0	99.0	68.5	0.0	99.0
9	SINBAR	1.6	lb ai/a	A	109	99.0	99.0	0.0	99.0	99.0	99.0	50.0	99.0	99.0	0.0	99.0
					209	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					309	65.0	99.0	0.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0	99.0
					409	0.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					Mean =	65.8	99.0	0.0	99.0	99.0	99.0	62.0	99.0	99.0	0.0	99.0
10	SINBAR	1.6	lb ai/a	A	110	99.0	99.0	0.0	99.0	99.0	99.0	0.0	99.0	99.0	99.0	99.0
					210	99.0	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
					310	99.0	99.0	0.0	99.0	99.0	99.0	0.0	99.0	99.0	70.0	99.0
					410	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	80.0	99.0
					Mean =	99.0	99.0	0.0	74.3	99.0	99.0	49.5	99.0	99.0	62.3	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	MUHSC APPLE WEED - CONTROL % 9/5/2011 120DAT 75	OXAST APPLE WEED - CONTROL % 9/5/2011 120DAT 76	PHTAM APPLE WEED - CONTROL % 9/5/2011 120DAT 77	PLALA APPLE WEED - CONTROL % 9/5/2011 120DAT 78	POAAN APPLE WEED - CONTROL % 9/5/2011 120DAT 79	POLPY APPLE WEED - CONTROL % 9/5/2011 120DAT 80	PRTQU APPLE WEED - CONTROL % 9/5/2011 120DAT 81	RUBSS APPLE WEED - CONTROL % 9/5/2011 120DAT 82	RUMSS APPLE WEED - CONTROL % 9/5/2011 120DAT 83	SETFA APPLE WEED - CONTROL % 9/5/2011 120DAT 84
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	99.0	0.0	0.0	99.0	99.0	0.0	0.0	99.0	0.0	99.0
	AMS	17	lb ai/a	A	206	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0
					304	99.0	0.0	99.0	99.0	99.0	0.0	0.0	99.0	99.0	0.0
					407	99.0	80.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0
					Mean =	99.0	44.8	74.3	99.0	99.0	49.5	24.8	99.0	74.3	24.8
3	ALION+	0.065	lb ai/a	A	103	99.0	0.0	0.0	99.0	99.0	85.0	85.0	99.0	0.0	99.0
	RELY 280	1.02	lb ai/a	A	207	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					301	99.0	0.0	99.0	99.0	99.0	0.0	70.0	99.0	99.0	99.0
					404	99.0	95.0	99.0	99.0	99.0	99.0	65.0	99.0	99.0	99.0
					Mean =	99.0	23.8	74.3	99.0	99.0	70.8	79.8	99.0	74.3	99.0
4	ALION+	0.065	lb ai/a	A	104	99.0	85.0	0.0	99.0	99.0	0.0	99.0	99.0	95.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	99.0	20.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	85.0
	AMS	2.8	lb ai/a	A	305	99.0	0.0	0.0	99.0	99.0	0.0	0.0	99.0	99.0	99.0
					406	99.0	20.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	99.0	31.3	49.5	99.0	99.0	49.5	74.3	99.0	98.0	95.5
5	ALION+	0.065	lb ai/a	A	105	99.0	0.0	30.0	99.0	99.0	99.0	99.0	99.0	65.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	95.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	99.0	0.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	405	99.0	50.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					Mean =	99.0	12.5	81.8	99.0	99.0	99.0	74.3	99.0	90.5	98.0
6	RELY 280+	1.02	lb ai/a	A	106	99.0	70.0	0.0	99.0	99.0	99.0	99.0	99.0	70.0	99.0
	MATRIX	0.0625	lb ai/a	A	203	99.0	80.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0
					302	99.0	0.0	50.0	0.0	99.0	99.0	0.0	99.0	99.0	99.0
					408	99.0	99.0	99.0	0.0	99.0	65.0	0.0	99.0	99.0	0.0
					Mean =	99.0	62.3	62.0	24.8	99.0	90.5	49.5	99.0	91.8	74.3

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	MUHSC APPLE WEED - CONTROL % 9/5/2011 120DAT 75	OXAST APPLE WEED - CONTROL % 9/5/2011 120DAT 76	PHTAM APPLE WEED - CONTROL % 9/5/2011 120DAT 77	PLALA APPLE WEED - CONTROL % 9/5/2011 120DAT 78	POAAN APPLE WEED - CONTROL % 9/5/2011 120DAT 79	POLPY APPLE WEED - CONTROL % 9/5/2011 120DAT 80	PRTQU APPLE WEED - CONTROL % 9/5/2011 120DAT 81	RUBSS APPLE WEED - CONTROL % 9/5/2011 120DAT 82	RUMSS APPLE WEED - CONTROL % 9/5/2011 120DAT 83	SETFA APPLE WEED - CONTROL % 9/5/2011 120DAT 84
7	ALION+	0.065	lb ai/a	A	107	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	99.0	70.0	99.0	99.0	99.0	99.0	50.0	99.0	99.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	99.0	0.0	0.0	99.0	99.0	99.0	0.0	99.0	50.0	99.0
					402	99.0	80.0	99.0	99.0	99.0	99.0	70.0	99.0	99.0	99.0
					Mean =	99.0	37.5	49.5	99.0	99.0	99.0	54.8	99.0	62.0	99.0
8	CHATEAU+	0.287	lb ai/a	A	108	99.0	0.0	50.0	99.0	99.0	99.0	70.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	99.0	0.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					308	99.0	99.0	0.0	99.0	99.0	99.0	0.0	99.0	99.0	99.0
					401	99.0	70.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0
					Mean =	99.0	42.3	62.0	99.0	99.0	99.0	42.3	99.0	99.0	74.3
9	SINBAR	1.6	lb ai/a	A	109	99.0	99.0	99.0	99.0	99.0	99.0	0.0	0.0	99.0	90.0
					209	99.0	80.0	99.0	99.0	99.0	99.0	95.0	99.0	99.0	50.0
					309	99.0	85.0	99.0	99.0	99.0	99.0	70.0	50.0	65.0	50.0
					409	99.0	75.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0
					Mean =	99.0	84.8	99.0	99.0	99.0	99.0	41.3	62.0	90.5	47.5
10	SINBAR	1.6	lb ai/a	A	110	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
					210	99.0	50.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	50.0
					310	99.0	80.0	99.0	99.0	99.0	99.0	35.0	99.0	99.0	50.0
					410	99.0	99.0	99.0	99.0	99.0	99.0	0.0	99.0	99.0	0.0
					Mean =	99.0	82.0	99.0	99.0	99.0	99.0	58.3	99.0	99.0	49.8

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	SETPU APPLE WEED - CONTROL % 9/5/2011 120DAT 85	SOOSS APPLE WEED - CONTROL % 9/5/2011 120DAT 86	TAROF APPLE WEED - CONTROL % 9/5/2011 120DAT 87	TOXRA APPLE WEED - CONTROL % 9/5/2011 120DAT 88	TRFRE APPLE WEED - CONTROL % 9/5/2011 120DAT 89
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	102	95.0	0.0	99.0	99.0	99.0
	AMS	17	lb ai/a	A	206	0.0	0.0	99.0	99.0	99.0
					304	95.0	0.0	99.0	99.0	99.0
					407	99.0	0.0	99.0	99.0	99.0
					Mean =	72.3	0.0	99.0	99.0	99.0
3	ALION+	0.065	lb ai/a	A	103	75.0	0.0	99.0	99.0	99.0
	RELY 280	1.02	lb ai/a	A	207	99.0	85.0	99.0	99.0	99.0
					301	95.0	80.0	99.0	99.0	99.0
					404	80.0	50.0	99.0	65.0	99.0
					Mean =	87.3	53.8	99.0	90.5	99.0
4	ALION+	0.065	lb ai/a	A	104	95.0	85.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	208	0.0	70.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	305	95.0	80.0	99.0	0.0	99.0
					406	70.0	80.0	99.0	0.0	99.0
					Mean =	65.0	78.8	99.0	49.5	99.0
5	ALION+	0.065	lb ai/a	A	105	70.0	85.0	99.0	0.0	99.0
	RELY 280+	1.02	lb ai/a	A	201	95.0	50.0	99.0	90.0	99.0
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	303	90.0	80.0	99.0	99.0	99.0
	AMS	2.8	lb ai/a	A	405	70.0	90.0	99.0	50.0	99.0
					Mean =	81.3	76.3	99.0	59.8	99.0
6	RELY 280+	1.02	lb ai/a	A	106	0.0	99.0	99.0	70.0	99.0
	MATRIX	0.0625	lb ai/a	A	203	85.0	99.0	99.0	99.0	50.0
					302	95.0	99.0	99.0	99.0	99.0
					408	80.0	0.0	99.0	99.0	99.0
					Mean =	65.0	74.3	99.0	91.8	86.8

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	SETPU APPLE WEED - CONTROL % 9/5/2011 120DAT 85	SOOSS APPLE WEED - CONTROL % 9/5/2011 120DAT 86	TAROF APPLE WEED - CONTROL % 9/5/2011 120DAT 87	TOXRA APPLE WEED - CONTROL % 9/5/2011 120DAT 88	TRFRE APPLE WEED - CONTROL % 9/5/2011 120DAT 89
7	ALION+	0.065	lb ai/a	A	107	99.0	99.0	99.0	0.0	99.0
	RELY 280+	1.02	lb ai/a	A	204	95.0	75.0	99.0	99.0	99.0
	MATRIX	0.0313	lb ai/a	A	306	95.0	85.0	99.0	0.0	99.0
					402	80.0	80.0	99.0	99.0	99.0
					Mean =	92.3	84.8	99.0	49.5	99.0
8	CHATEAU+	0.287	lb ai/a	A	108	85.0	99.0	99.0	0.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	202	0.0	50.0	99.0	0.0	0.0
					308	99.0	99.0	99.0	99.0	99.0
					401	99.0	99.0	99.0	0.0	0.0
					Mean =	70.8	86.8	99.0	24.8	49.5
9	SINBAR	1.6	lb ai/a	A	109	70.0	99.0	99.0	0.0	99.0
					209	99.0	95.0	99.0	99.0	99.0
					309	50.0	95.0	99.0	0.0	99.0
					409	0.0	95.0	99.0	0.0	99.0
					Mean =	54.8	96.0	99.0	24.8	99.0
10	SINBAR	1.6	lb ai/a	A	110	99.0	99.0	99.0	99.0	99.0
					210	99.0	99.0	99.0	99.0	99.0
					310	50.0	99.0	99.0	35.0	99.0
					410	0.0	99.0	99.0	0.0	99.0
					Mean =	62.0	99.0	99.0	58.3	99.0

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
AMBEL = Ambrosia artemisiifolia
AMBTR = Ambrosia trifida
CAGSE = Calystegia sepium
CARHI = Cardamine hirsuta
CIRAR = Cirsium arvense
CYPES = Cyperus esculentus
GLEHE = Glechoma hederacea
OXAST = Oxalis stricta
PHTAM = Phytolacca americana
PLALA = Plantago lanceolata
POLPY = Persicaria pensylvanica
PRTQU = Parthenocissus quinquefolia
RUBSS = Rubus sp.
RUMSS = Rumex sp.
TAROF = Taraxacum officinale
TOXRA = Toxicodendron radicans
TRFRE = Trifolium repens
DAUCA = Daucus carota
POAAN = Poa annua
SETFA = Setaria faberi
SETPU = Setaria pumila
VACRE = Vaccinium retusum
DIGSA = Digitaria sanguinalis
MUHSC = Muhlenbergia schreberi
SOOSS = Solidago sp.
Rating Unit
% = PERCENT

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				APPLE	AGRASS	AMBEL	AMBTR	CAGSE	CARHI	CIRAR	CYPES	GLEHE	OXAST	PHTAM
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011
	Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
	# Subsamples, Dec.				- 0	- 0									
1	UNTREATED CONTROL				0 a	0 c	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	0 a	35 b	99.0 a	94.3 a	96.8 a	99.0 a	99.0 a	99.0 a	74.3 a	91.8 a	74.3 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	0 a	70 a	99.0 a	98.0 a	98.0 a	99.0 a	99.0 a	99.0 a	98.0 a	67.3 a	79.3 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	0 a	80 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	81.8 a	99.0 a	86.8 a	86.8 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	0 a	93 a	99.0 a	99.0 a	99.0 a	99.0 a	98.0 a	99.0 a	99.0 a	99.0 a	99.0 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	0 a	85 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	98.0 a	99.0 a	73.5 a	74.3 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	0 a	85 a	99.0 a	99.0 a	94.3 a	99.0 a	99.0 a	96.8 a	86.8 a	96.8 a	86.8 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	0 a	97 a	99.0 a	99.0 a	94.3 a	99.0 a	86.8 a	86.8 a	99.0 a	99.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	0 a	93 a	99.0 a	99.0 a	99.0 a	99.0 a	91.8 a	99.0 a	99.0 a	59.5 a	99.0 a
10	SINBAR	1.6	lb ai/a	A	0 a	99 a	99.0 a	99.0 a	99.0 a	99.0 a	84.3 a	98.0 a	99.0 a	96.8 a	99.0 a
	LSD (P=.05)				0.0	27.2	0.00	4.49	6.36	0.00	18.81	20.00	25.77	35.74	38.94
	Standard Deviation				0.0	18.7	0.00	3.09	4.38	0.00	12.96	13.78	17.76	24.63	26.84
	CV				0.0	25.43	0.0	3.49	4.99	0.0	15.14	16.08	20.82	31.98	33.66
	Bartlett's X2				0.0	19.288	0.0	5.361	6.746	0.0	12.302	29.114	15.121	20.44	2.613
	P(Bartlett's X2)				.	0.007*	.	0.021*	0.08	.	0.006*	0.001*	0.001*	0.002*	0.625
	Replicate F				0.000	2.949	0.000	0.853	1.673	0.000	1.030	0.574	0.681	0.901	1.637
	Replicate Prob(F)				1.0000	0.0506	1.0000	0.4773	0.1963	1.0000	0.3949	0.6371	0.5716	0.4534	0.2041
	Treatment F				0.000	11.610	0.000	405.489	199.316	0.000	22.279	19.871	12.237	6.156	4.937
	Treatment Prob(F)				1.0000	0.0001	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0006

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	PLALA APPLE WEED - CONTROL	POLPY APPLE WEED - CONTROL	PRTQU APPLE WEED - CONTROL	RUBSS APPLE WEED - CONTROL	RUMSS APPLE WEED - CONTROL	TAROF APPLE WEED - CONTROL	TOXRA APPLE WEED - CONTROL	TRFRE APPLE WEED - CONTROL	APPLE TREE - INJURY	AMBEL APPLE WEED - CONTROL	AMBTR APPLE WEED - CONTROL
	Weed Code				PLALA	POLPY	PRTQU	RUBSS	RUMSS	TAROF	TOXRA	TRFRE		AMBEL	AMBTR
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	TREE	WEED	WEED
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	7/6/2011	7/6/2011	7/6/2011
	Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	60DAT	60DAT	60DAT
	# Subsamples, Dec.											- 0	- 0	- 0	- 0
					12	13	14	15	16	17	18	19	20	21	22
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0 b	0 a	0 b	0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	99.0 a	74.3 a	99.0 a	99.0 a	95.5 a	81.0 a	99.0 a	99 a	0 a	0 b	99 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	79.3 a	98.0 a	98.0 a	74.3 a	99.0 a	99 a	0 a	99 a	99 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	89.3 a	99.0 a	99 a	0 a	74 a	92 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	54.5 ab	99.0 a	99.0 a	99.0 a	64.5 a	99 a	0 a	99 a	92 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	59.8 a	99.0 a	57.0 ab	99.0 a	72.0 a	99.0 a	74.3 a	99 a	0 a	94 a	99 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	69.5 a	99.0 a	89.3 a	99.0 a	52.3 a	99 a	0 a	74 a	99 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	91.8 a	99.0 a	74.3 a	99.0 a	73.3 a	99.0 a	67.0 a	99 a	0 a	99 a	99 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	79.3 a	99.0 a	89.3 a	99.0 a	97.0 a	99.0 a	79.5 a	99 a	0 a	99 a	99 a
10	SINBAR	1.6	lb ai/a	A	91.8 a	99.0 a	41.0 ab	99.0 a	98.0 a	99.0 a	76.8 a	99 a	0 a	99 a	80 a
	LSD (P=.05)				25.40	22.71	47.50	0.92	28.87	26.91	42.89	0.0	0.0	32.8	14.7
	Standard Deviation				17.51	15.65	32.74	0.63	19.89	18.55	29.56	0.0	0.0	22.6	10.2
	CV				21.42	18.07	49.39	0.71	24.23	22.12	41.56	0.0	0.0	30.62	11.85
	Bartlett's X2				4.594	0.0	2.906	0.0	43.256	3.274	1.795	0.0	0.0	6.234	1.053
	P(Bartlett's X2)				0.204	.	0.821	.	0.001*	0.195	0.877	.	.	0.044*	0.591
	Replicate F				1.529	1.000	2.379	1.000	1.662	0.567	2.943	0.000	0.000	0.781	0.641
	Replicate Prob(F)				0.2295	0.4079	0.0918	0.4079	0.1987	0.6417	0.0509	1.0000	1.0000	0.5150	0.5955
	Treatment F				12.848	16.111	3.387	9780.001	9.490	11.030	4.029	0.000	0.000	12.618	36.709
	Treatment Prob(F)				0.0001	0.0001	0.0067	0.0001	0.0001	0.0001	0.0023	1.0000	1.0000	0.0001	0.0001

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The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	CAGSE	CARHI	CIRAR	CYPES	DAUCA	GLEHE	OXAST	PHTAM	PLALA	POAAN	POLPY
	Weed Code				CAGSE	CARHI	CIRAR	CYPES	DAUCA	GLEHE	OXAST	PHTAM	PLALA	POAAN	POLPY
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011
	Trt-Eval Interval				60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
					23	24	25	26	27	28	29	30	31	32	33
1	UNTREATED CONTROL				0 b	0 b	0 b	0 b	0 b	0 b	0 a	0 b	0 b	0 b	0 c
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	74 a	99 a	99 a	99 a	99 a	0 b	50 a	74 ab	74 a	74 a	50 b
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99 a	99 a	74 a	99 a	74 a	73 ab	0 a	74 ab	99 a	99 a	99 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	99 a	99 a	99 a	99 a	50 a	50 ab	74 a	50 ab	99 a	99 a	99 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99 a	99 a	96 a	99 a	96 a	70 ab	97 a	74 ab	99 a	99 a	99 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	99 a	99 a	99 a	99 a	74 a	50 ab	74 a	74 ab	42 ab	99 a	99 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	99 a	99 a	99 a	74 a	79 a	99 a	65 a	74 ab	99 a	99 a	99 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	99 a	99 a	74 a	74 a	96 a	50 ab	74 a	87 a	99 a	99 a	99 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	99 a	99 a	97 a	99 a	99 a	47 ab	74 a	99 a	74 a	99 a	99 a
10	SINBAR	1.6	lb ai/a	A	99 a	99 a	80 a	99 a	99 a	94 a	50 a	99 a	87 a	99 a	99 a
	LSD (P=.05)				22.7	0.0	31.3	30.3	47.5	56.6	58.5	51.8	42.5	22.7	26.2
	Standard Deviation				15.7	0.0	21.6	20.9	32.7	39.0	40.3	35.7	29.3	15.7	18.1
	CV				18.07	0.0	26.45	24.8	42.74	73.26	72.34	50.64	37.94	18.07	21.48
	Bartlett's X2				0.0	0.0	21.584	0.0	15.694	6.973	10.751	1.907	1.661	0.0	0.0
	P(Bartlett's X2)				.	.	0.001*	.	0.008*	0.323	0.15	0.928	0.646	.	.
	Replicate F				1.000	0.000	2.710	2.250	0.186	2.499	2.290	3.627	0.338	1.000	1.000
	Replicate Prob(F)				0.4079	1.0000	0.0648	0.1053	0.9047	0.0809	0.1009	0.0255	0.7977	0.4079	0.4079
	Treatment F				16.111	0.000	8.016	9.000	3.673	2.983	2.575	2.566	5.002	16.111	13.667
	Treatment Prob(F)				0.0001	1.0000	0.0001	0.0001	0.0041	0.0134	0.0276	0.0281	0.0005	0.0001	0.0001

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The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	34	35	36	37	38	39	40	41	42	43	44
	Weed Code				RUBSS	RUMSS	SETFA	SETPU	TAROF	TRFRE	TAROF	VACRE		AMBEL	AMBTR
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	WEED -	WEED -
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011	8/6/2011	8/6/2011	8/6/2011
	Trt-Eval Interval				60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	90DAT	90DAT	90DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0			
1	UNTREATED CONTROL				0 b	0 b	0 c	0 a	0 b	0 b	0 b	0 a	0.0 a	0.0 b	0.0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	74 a	74 a	25 bc	25 a	74 a	50 a	74 a	50 a	0.0 a	8.8 b	74.3 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99 a	74 a	99 a	73 a	74 a	74 a	74 a	74 a	0.0 a	99.0 a	99.0 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	99 a	99 a	74 ab	50 a	99 a	94 a	99 a	50 a	0.0 a	86.8 a	99.0 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99 a	92 a	98 a	70 a	99 a	99 a	99 a	74 a	0.0 a	99.0 a	99.0 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	99 a	62 a	99 a	50 a	99 a	99 a	99 a	74 a	0.0 a	67.0 a	99.0 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	99 a	74 a	99 a	99 a	99 a	99 a	99 a	66 a	0.0 a	99.0 a	99.0 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	99 a	74 a	74 ab	50 a	99 a	97 a	99 a	74 a	0.0 a	99.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	87 a	92 a	47 abc	50 a	74 a	99 a	74 a	85 a	0.0 a	99.0 a	99.0 a
10	SINBAR	1.6	lb ai/a	A	99 a	99 a	99 a	99 a	87 a	99 a	87 a	50 a	0.0 a	92.0 a	99.0 a
	LSD (P=.05)				23.2	45.3	43.8	63.1	42.1	36.4	42.1	56.3	0.00	20.69	22.71
	Standard Deviation				16.0	31.2	30.2	43.5	29.0	25.1	29.0	38.8	0.00	14.26	15.65
	CV				18.71	42.18	42.27	77.18	36.04	30.95	36.04	65.14	0.0	19.03	18.07
	Bartlett's X2				3.869	10.738	15.302	0.266	1.641	16.503	1.641	3.919	0.0	7.155	0.0
	P(Bartlett's X2)				0.049*	0.097	0.004*	1.00	0.65	0.001*	0.65	0.864	.	0.067	.
	Replicate F				1.345	3.618	2.342	1.620	0.459	0.277	0.459	5.540	0.000	1.672	1.000
	Replicate Prob(F)				0.2808	0.0257	0.0955	0.2079	0.7131	0.8415	0.7131	0.0043	1.0000	0.1965	0.4079
	Treatment F				15.164	3.419	5.666	1.987	4.414	6.822	4.414	1.586	0.000	29.250	16.111
	Treatment Prob(F)				0.0001	0.0063	0.0002	0.0811	0.0013	0.0001	0.0013	0.1698	1.0000	0.0001	0.0001

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The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE	MUHSC	OXAST	PHTAM	PLALA	POAAN
	Weed Code				CAGSE	CIRAR	CYPES	DAUCA	DIGSA	GLEHE	MUHSC	OXAST	PHTAM	PLALA	POAAN
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Trt-Eval Interval				90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
	# Subsamples, Dec.														
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 a	24.8 a	0.0 a	0.0 b	0.0 c	0.0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	99.0 a	99.0 a	99.0 a	79.3 a	0.0 b	24.8 a	99.0 a	99.0 a	74.3 ab	99.0 a	99.0 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99.0 a	74.3 a	74.3 a	81.0 a	99.0 a	70.8 a	73.3 a	73.3 a	49.5 ab	99.0 a	99.0 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	74.3 a	72.0 a	99.0 a	87.3 a	89.3 a	64.5 a	49.5 ab	99.0 a	99.0 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	99.0 a	80.8 a	74.3 a	70.8 a	66.0 a	66.0 a	74.3 ab	99.0 a	99.0 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	99.0 a	99.0 a	99.0 a	76.3 a	99.0 a	42.3 a	74.3 a	62.0 a	74.3 ab	24.8 b	99.0 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	91.8 a	99.0 a	74.3 a	89.3 a	89.5 a	83.3 a	59.8 a	84.5 a	74.3 ab	99.0 a	99.0 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	84.3 a	74.3 a	78.0 a	93.0 a	99.0 a	42.3 a	63.5 a	64.5 a	49.5 ab	99.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	99.0 a	74.3 a	74.3 a	99.0 a	0.0 b	62.0 a	65.8 a	82.0 a	99.0 a	99.0 a	99.0 a
10	SINBAR	1.6	lb ai/a	A	74.3 a	79.5 a	99.0 a	65.8 a	99.0 a	62.0 a	99.0 a	49.5 a	99.0 a	99.0 a	99.0 a
	LSD (P=.05)				27.52	37.00	47.21	42.19	22.92	55.09	57.80	51.49	51.72	22.71	0.00
	Standard Deviation				18.97	25.50	32.54	29.08	15.79	37.97	39.84	35.49	35.64	15.65	0.00
	CV				22.46	31.98	42.2	39.49	23.97	69.63	55.76	55.0	55.39	19.17	0.0
	Bartlett's X2				3.761	1.159	0.115	6.943	3.935	8.507	2.534	4.617	0.2	0.0	0.0
	P(Bartlett's X2)				0.152	0.763	0.998	0.435	0.047*	0.386	0.924	0.707	1.00	.	.
	Replicate F				0.816	3.495	1.925	1.642	1.573	2.872	0.947	3.034	6.429	1.000	0.000
	Replicate Prob(F)				0.4964	0.0291	0.1494	0.2029	0.2188	0.0548	0.4317	0.0463	0.0020	0.4079	1.0000
	Treatment F				10.576	5.676	3.315	3.623	34.093	2.064	1.201	2.247	2.657	22.333	0.000
	Treatment Prob(F)				0.0001	0.0002	0.0075	0.0045	0.0001	0.0704	0.3344	0.0503	0.0238	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	POLPY APPLE WEED - CONTROL	PRTQU APPLE WEED - CONTROL	RUBSS APPLE WEED - CONTROL	RUMSS APPLE WEED - CONTROL	SETFA APPLE WEED - CONTROL	SETPU APPLE WEED - CONTROL	SOOSS APPLE WEED - CONTROL	TAROF APPLE WEED - CONTROL	TOXRA APPLE WEED - CONTROL	TRFRE APPLE WEED - CONTROL	APPLE TREE - INJURY
	Weed Code														
	Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
	Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	WEED	TREE
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	9/5/2011
	Trt-Eval Interval				90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	120DAT
	# Subsamples, Dec.														
1	UNTREATED CONTROL				0.0 b	0.0 a	0.0 c	0.0 c	0.0 c	0.0 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 a
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	49.5 a	49.5 a	99.0 a	99.0 a	24.8 bc	24.8 a	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	73.3 a	46.0 a	99.0 a	49.5 b	99.0 a	70.8 a	81.8 a	99.0 a	95.5 a	99.0 a	0.0 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	74.3 a	37.3 a	99.0 a	99.0 a	95.5 a	66.0 a	99.0 a	99.0 a	24.8 ab	99.0 a	0.0 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99.0 a	64.5 a	99.0 a	93.0 a	98.0 a	69.8 a	57.3 a	99.0 a	39.8 ab	99.0 a	0.0 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	99.0 a	74.3 a	99.0 a	99.0 a	74.3 ab	42.3 a	89.3 a	99.0 a	49.5 ab	99.0 a	0.0 a
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	99.0 a	57.3 a	99.0 a	74.5 ab	99.0 a	86.8 a	93.3 a	99.0 a	49.5 ab	99.0 a	0.0 a
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	99.0 a	41.0 a	99.0 a	99.0 a	74.3 ab	42.3 a	91.8 a	99.0 a	62.0 ab	95.5 a	0.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	99.0 a	57.3 a	74.5 b	99.0 a	47.5 abc	37.3 a	86.8 a	99.0 a	65.8 ab	99.0 a	0.0 a
10	SINBAR	1.6	lb ai/a	A	99.0 a	96.8 a	99.0 a	91.8 a	49.8 abc	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a
	LSD (P=.05)				38.00	56.57	12.98	28.03	38.64	58.76	27.16	0.00	57.91	3.21	0.00
	Standard Deviation				26.19	38.99	8.95	19.32	26.63	40.50	18.72	0.00	39.91	2.21	0.00
	CV				33.1	74.44	10.32	24.04	40.23	75.17	23.48	0.0	68.26	2.49	0.0
	Bartlett's X2				0.091	10.531	0.0	8.459	21.8	1.638	5.567	0.0	8.397	0.0	0.0
	P(Bartlett's X2)				0.956	0.23	.	0.037*	0.001*	0.977	0.351	.	0.21	.	.
	Replicate F				2.821	3.623	1.000	2.844	5.658	1.248	0.495	0.000	0.927	1.000	0.000
	Replicate Prob(F)				0.0578	0.0256	0.4079	0.0564	0.0038	0.3119	0.6891	1.0000	0.4412	0.4079	1.0000
	Treatment F				6.201	1.693	49.291	11.276	6.813	2.195	10.717	0.000	2.731	794.796	0.000
	Treatment Prob(F)				0.0001	0.1395	0.0001	0.0001	0.0001	0.0554	0.0001	1.0000	0.0209	0.0001	1.0000

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The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	AMBEL APPLE WEED - CONTROL	AMBTR APPLE WEED - CONTROL	CAGSE APPLE WEED - CONTROL	CIRAR APPLE WEED - CONTROL	CYPES APPLE WEED - CONTROL	DAUCA APPLE WEED - CONTROL	DIGSA APPLE WEED - CONTROL	GLEHE APPLE WEED - CONTROL	MUHSC APPLE WEED - CONTROL	OXAST APPLE WEED - CONTROL	PHTAM APPLE WEED - CONTROL
	Weed Code														
	Crop Code														
	Part Rated														
	Rating Data Type														
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011
	Trt-Eval Interval				120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT
	# Subsamples, Dec.														
					67	68	69	70	71	72	73	74	75	76	77
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 b	0.0 b	0.0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	0.0 b	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	0.0 c	99.0 a	99.0 a	44.8 ab	74.3 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	99.0 a	74.3 a	99.0 a	81.0 a	87.5 a	70.8 a	99.0 a	23.8 ab	74.3 a
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	74.3 a	99.0 a	99.0 a	99.0 a	74.3 a	82.0 a	89.8 a	99.0 a	99.0 a	31.3 ab	49.5 ab
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99.0 a	98.0 a	99.0 a	86.8 a	99.0 a	95.5 a	70.0 ab	74.3 a	99.0 a	12.5 ab	81.8 a
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	67.0 a	74.3 a	99.0 a	99.0 a	99.0 a	99.0 a	35.0 bc	99.0 a	99.0 a	62.3 ab	62.0 ab
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	74.3 a	49.5 a	91.8 a	99.0 a	74.3 a	74.3 a	78.8 ab	74.3 a	99.0 a	37.5 ab	49.5 ab
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	99.0 a	99.0 a	74.3 a	99.0 a	99.0 a	68.5 a	0.0 c	99.0 a	99.0 a	42.3 ab	62.0 ab
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	99.0 a	99.0 a	99.0 a	62.0 a	99.0 a	99.0 a	0.0 c	99.0 a	99.0 a	84.8 a	99.0 a
10	SINBAR	1.6	lb ai/a	A	74.3 a	99.0 a	99.0 a	49.5 a	99.0 a	99.0 a	62.3 ab	99.0 a	99.0 a	82.0 ab	99.0 a
	LSD (P=.05)				42.56	33.47	22.95	40.01	32.71	30.17	34.77	34.30	0.00	50.45	43.95
	Standard Deviation				29.33	23.07	15.81	27.57	22.54	20.79	23.97	23.64	0.00	34.77	30.29
	CV				42.77	28.28	18.41	35.93	26.79	26.08	56.62	29.06	0.0	82.59	46.51
	Bartlett's X2				0.014	15.67	3.641	1.918	0.0	10.466	22.839	0.006	0.0	7.986	0.855
	P(Bartlett's X2)				1.00	0.001*	0.056	0.59	.	0.033*	0.001*	0.997	.	0.435	0.991
	Replicate F				2.080	1.751	1.638	2.258	0.643	0.286	1.171	3.832	0.000	2.503	9.649
	Replicate Prob(F)				0.1263	0.1803	0.2040	0.1044	0.5941	0.8347	0.3391	0.0208	1.0000	0.0806	0.0002
	Treatment F				6.823	8.209	15.549	5.514	7.714	8.486	10.833	6.921	0.000	2.555	3.627
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	1.0000	0.0287	0.0044

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	PLALA APPLE WEED - CONTROL	POAAN APPLE WEED - CONTROL	POLPY APPLE WEED - CONTROL	PRTQU APPLE WEED - CONTROL	RUBSS APPLE WEED - CONTROL	RUMSS APPLE WEED - CONTROL	SETFA APPLE WEED - CONTROL	SETPU APPLE WEED - CONTROL	SOOSS APPLE WEED - CONTROL	TAROF APPLE WEED - CONTROL	TOXRA APPLE WEED - CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011
	Trt-Eval Interval				120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT	120DAT
	# Subsamples, Dec.														
					78	79	80	81	82	83	84	85	86	87	88
1	UNTREATED CONTROL				0.0 c	0.0 b	0.0 b	0.0 a	0.0 c	0.0 b	0.0 c	0.0 a	0.0 b	0.0 b	0.0 b
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	99.0 a	99.0 a	49.5 a	24.8 a	99.0 a	74.3 a	24.8 bc	72.3 a	0.0 b	99.0 a	99.0 a
	AMS	17	lb ai/a	A											
3	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	70.8 a	79.8 a	99.0 a	74.3 a	99.0 a	87.3 a	53.8 a	99.0 a	90.5 ab
	RELY 280	1.02	lb ai/a	A											
4	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	49.5 a	74.3 a	99.0 a	98.0 a	95.5 a	65.0 a	78.8 a	99.0 a	49.5 ab
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
5	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	99.0 a	74.3 a	99.0 a	90.5 a	98.0 a	81.3 a	76.3 a	99.0 a	59.8 ab
	RELY 280+	1.02	lb ai/a	A											
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A											
	AMS	2.8	lb ai/a	A											
6	RELY 280+	1.02	lb ai/a	A	24.8 b	99.0 a	90.5 a	49.5 a	99.0 a	91.8 a	74.3 ab	65.0 a	74.3 a	99.0 a	91.8 ab
	MATRIX	0.0625	lb ai/a	A											
7	ALION+	0.065	lb ai/a	A	99.0 a	99.0 a	99.0 a	54.8 a	99.0 a	62.0 a	99.0 a	92.3 a	84.8 a	99.0 a	49.5 ab
	RELY 280+	1.02	lb ai/a	A											
	MATRIX	0.0313	lb ai/a	A											
8	CHATEAU+	0.287	lb ai/a	A	99.0 a	99.0 a	99.0 a	42.3 a	99.0 a	99.0 a	74.3 ab	70.8 a	86.8 a	99.0 a	24.8 ab
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A											
9	SINBAR	1.6	lb ai/a	A	99.0 a	99.0 a	99.0 a	41.3 a	62.0 b	90.5 a	47.5 abc	54.8 a	96.0 a	99.0 a	24.8 ab
10	SINBAR	1.6	lb ai/a	A	99.0 a	99.0 a	99.0 a	58.3 a	99.0 a	99.0 a	49.8 abc	62.0 a	99.0 a	99.0 a	58.3 ab
	LSD (P=.05)				22.71	0.00	40.67	56.35	21.73	34.04	38.64	53.04	33.36	0.00	56.61
	Standard Deviation				15.65	0.00	28.03	38.84	14.97	23.46	26.63	36.55	22.99	0.00	39.02
	CV				19.17	0.0	37.11	77.83	17.53	30.11	40.23	56.19	35.4	0.0	71.23
	Bartlett's X2				0.0	0.0	3.855	4.059	0.0	21.858	21.8	14.407	25.145	0.0	7.679
	P(Bartlett's X2)				.	.	0.278	0.852	.	0.001*	0.001*	0.072	0.001*	.	0.362
	Replicate F				1.000	0.000	2.571	4.196	1.000	5.416	5.658	0.641	0.548	0.000	1.769
	Replicate Prob(F)				0.4079	1.0000	0.0750	0.0147	0.4079	0.0048	0.0038	0.5950	0.6537	1.0000	0.1769
	Treatment F				22.333	0.000	5.691	1.599	18.476	6.582	6.813	1.972	10.055	0.000	2.772
	Treatment Prob(F)				0.0001	1.0000	0.0002	0.1657	0.0001	0.0001	0.0001	0.0836	0.0001	1.0000	0.0194

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					TRFRE
Crop Code					APPLE
Part Rated					WEED -
Rating Data Type					CONTROL
Rating Unit					%
Rating Date					9/5/2011
Trt-Eval Interval					120DAT
# Subsamples, Dec.					
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	89
1	UNTREATED CONTROL				0.0 c
2	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	99.0 a
	AMS	17	lb ai/a	A	
3	ALION+	0.065	lb ai/a	A	99.0 a
	RELY 280	1.02	lb ai/a	A	
4	ALION+	0.065	lb ai/a	A	99.0 a
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	
	AMS	2.8	lb ai/a	A	
5	ALION+	0.065	lb ai/a	A	99.0 a
	RELY 280+	1.02	lb ai/a	A	
	ROUNDUP WEATHERMAX+	1.38	lb ai/a	A	
	AMS	2.8	lb ai/a	A	
6	RELY 280+	1.02	lb ai/a	A	86.8 a
	MATRIX	0.0625	lb ai/a	A	
7	ALION+	0.065	lb ai/a	A	99.0 a
	RELY 280+	1.02	lb ai/a	A	
	MATRIX	0.0313	lb ai/a	A	
8	CHATEAU+	0.287	lb ai/a	A	49.5 b
	ROUNDUP WEATHERMAX	1.38	lb ai/a	A	
9	SINBAR	1.6	lb ai/a	A	99.0 a
10	SINBAR	1.6	lb ai/a	A	99.0 a
LSD (P=.05)					27.86
Standard Deviation					19.20
CV					23.16
Bartlett's X2					1.904
P(Bartlett's X2)					0.168
Replicate F					1.487
Replicate Prob(F)					0.2403
Treatment F					11.832
Treatment Prob(F)					0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH ALION

Trial ID: APPWCCTALIONW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
AMBEL = Ambrosia artemisiifolia
AMBTR = Ambrosia trifida
CAGSE = Calystegia sepium
CARHI = Cardamine hirsuta
CIRAR = Cirsium arvense
CYPES = Cyperus esculentus
GLEHE = Glechoma hederacea
OXAST = Oxalis stricta
PHTAM = Phytolacca americana
PLALA = Plantago lanceolata
POLPY = Persicaria pensylvanica
PRTQU = Parthenocissus quinquefolia
RUBSS = Rubus sp.
RUMSS = Rumex sp.
TAROF = Taraxacum officinale
TOXRA = Toxicodendron radicans
TRFRE = Trifolium repens
DAUCA = Daucus carota
POAAN = Poa annua
SETFA = Setaria faberi
SETPU = Setaria pumila
VACRE = Vaccinium retusum
DIGSA = Digitaria sanguinalis
MUHSC = Muhlenbergia schreberi
SOOSS = Solidago sp.
Rating Unit
% = PERCENT

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res.Assoc.
Investigator: Doug Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: F one-year/final **Trial Reliability:** Reliable
Initiation Date: 5/18/2011 **Planned Completion Date:** 7/30/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: Ohio -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:

Objective:

Evaluate rates of Lorox 50DF applied POST in apples for crop injury and weed control.

Conclusions:

Conclusion:

There was no visual injury to the apple trees with the rates of Lorox used in the trial. There were 14 weed species present in the trial. At 6 weeks after treatment (WAT), Lorox at 2 lbs product /A provided the best weed control with 80% or higher on 10 weed species. Significant increase in plantain and groundsel control was noted with the 1 and 2 lb rate over 0.5 lb/A product rate. Lorox was poor on marestail control with all rates. Lorox at 0.5 lbs had good weed control of only 6 species, and 1 lb/A product improved the number to 8 species (with 80% or better control).

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res.Assoc.
Affiliation: OARDC/ The Ohio State University
Address: 1680 MAdison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Cooperator/Landowner

Cooperator: Bruce Williams **Role:** Farm Manager
Organization: OARDC/ The Ohio State University **Org. Type:** OARDC
Address 1: 1680 Madison Ave.
Phone No.: 3302633878
City: Wooster **Fax No.:** 3302633887
State/Prov: Ohio **Mobile No.:** 330-464-0412
Postal Code: 44691 **E-mail:** williams.20@osu.edu
Country: USA United States

Crop Description

Crop 1: MABSD Malus domestica Apple
Variety: FUJI, GOLDEN DELICIOUS **Description:** Description
BBCH Scale: BPOM **Planting Date:** 5/15/2002
Planting Method: TRAHAN transplanted - hand
Depth, Unit: 18 IN **Perennial Age, Unit:** 9 YR
Row Spacing, Unit: 15 FT **Spacing Within Row, Unit:** 15 FT
Seed Bed: COMPAC compacted **Soil Temperature, Unit:** 62.4 F
Soil Moisture: GOOD good

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Description

Pest 1 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
Description: 2 IN

Pest 2 Type: W **Code:** DIGSS Digitaria sp.
Common Name: Crabgrass
Description: 0.5 IN , 3LF

Pest 3 Type: W **Code:** OXAST Oxalis stricta
Common Name: Common yellow wood sorrel
Description: 0.5 IN

Pest 4 Type: W **Code:** PLAMA Plantago major
Common Name: Broadleaf plantain
Description: 3 LF, 1 IN

Pest 5 Type: W **Code:** POAAN Poa annua
Common Name: Annual bluegrass
Description: 1 IN

Pest 6 Type: W **Code:** SENVU Senecio vulgaris
Common Name: Common groundsel
Description: 1.5 IN

Pest 7 Type: W **Code:** SONAR Sonchus arvensis
Common Name: Perennial sowthistle
Description: 3 LF, 0.5-1 IN

Pest 8 Type: W **Code:** STEME Stellaria media
Common Name: Common chickweed
Description: 2-3 IN DIAM

Pest 9 Type: W **Code:** TARSS Taraxacum sp.
Common Name: Dandelion
Description: 2-3 IN DIAM

Pest10 Type: W **Code:** TRFSS Trifolium sp.
Common Name: Clover
Description: 1-2 IN

Site and Design

Plot Width, Unit: 6 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT PLOT plot
Plot Area, Unit: 150 FT2 **Tillage Type:** NONE
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:
Maintenance was provided by the Hort and Crop Science Farm Manager in accordance with the OSU 2011 Tree Fruit Production Guide.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Soil Description

% Sand: 15 **% OM:** 3 **Texture:** SICL silty clay loam
% Silt: 75 **pH:** 6.9 **Soil Name:** Wooster Silt Loam
% Clay: 15 **CEC:** 8.5 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 4 MI

Application Description

	A
Application Date:	5/18/2011
Time of Day:	1:30 PM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROADC
Applied By:	Tim Koch
Air Temperature, Unit:	67 F
% Relative Humidity:	75.6
Wind Velocity, Unit:	2.7 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	62.4 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Rain Occurred On:	5/23/2011

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	MABSD BPOM
Height, Unit:	10 FT

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	CHEAL W
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 2.5
Density, Unit:	5 M2

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest 2 Code, Type, Scale:	DIGSS W
Height, Unit:	0.5 IN
Height Minimum, Maximum:	0.5 1.0
Density, Unit:	5 M2
Pest 3 Code, Type, Scale:	OXAST W
Diameter, Unit:	2 IN
Height, Unit:	0.5 IN
Height Minimum, Maximum:	0.5 1.0
Density, Unit:	10 M2
Pest 4 Code, Type, Scale:	PLAMA W
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1.0
Density, Unit:	2 M2
Pest 5 Code, Type, Scale:	POAAN W
Diameter, Unit:	2 IN
Height, Unit:	1 IN
Density, Unit:	3 M2
Pest 6 Code, Type, Scale:	SENVU W
Height, Unit:	1.5 IN
Height Minimum, Maximum:	0.5 2.5
Density, Unit:	25 M2
Pest 7 Code, Type, Scale:	SONAR W
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1.0
Density, Unit:	1 M2
Pest 8 Code, Type, Scale:	STEME W
Diameter, Unit:	2.5 IN
Height, Unit:	0.5 IN
Density, Unit:	10 M2
Pest 9 Code, Type, Scale:	TARSS W
Diameter, Unit:	2.5 IN
Pest10 Code, Type, Scale:	TRFSS W
Height, Unit:	0.5 IN
Height Minimum, Maximum:	0.5 0.75
Density, Unit:	5 M2

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Application Equipment

	A
Appl. Equipment:	SPRAYER
Equipment Type:	BACKPA
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TURBO TWI
Nozzle Size:	J60-11002
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	4
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.7 MPH
Spray Volume, Unit:	25 gal/ac
Mix Size, Unit:	2 liters
Propellant:	CO2

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Reps: 3 Appl Code: B Plots: 6 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.0754)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
2	LOROX+	50	DF	0.25	lb ai/a	POST	B	4.793 g/mx	102	201	304
	NIS	1	SL	0.25	% v/v	POST	B	4.999 ml/mx			
3	LOROX+	50	DF	0.5	lb ai/a	POST	B	9.586 g/mx	103	202	301
	NIS	1	SL	0.25	% v/v	POST	B	4.999 ml/mx			
4	LOROX+	50	DF	1	lb ai/a	POST	B	19.17 g/mx	104	203	302
	NIS	1	SL	0.25	% v/v	POST	B	4.999 ml/mx			

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Reps: 3 Appl Code: _ Plots: 6 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.0754)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
1	UNTREATED CONTROL								101	204	303

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
41.939	g	LOROX+	50	DF	
18.748	ml	NIS	1	SL	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Rep	Blk								
	4								
3	3	301	3	302	4	303	1	304	2
2	2	201	2	202	3	203	4	204	1
1	1	101	1	102	2	103	3	104	4

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7
	Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code						STEME	TRFRE	DIGSA	TAROF	POAAN	SENVU
	Pest Scientific Name						Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>
	Pest Name						Common chickwe>	White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated					TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011
	Rating Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					9 9	9 9	9 9	9 9	9 9	9 9	9 9
	Trt-Eval Interval					1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
	Plant-Eval Interval					3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1
	Number of Decimals					0	0	0	0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0
					204	0	0	0	0	0	0	0
					303	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0
2	LOROX+	0.25	lb ai/a	B	102	0	99	99	99	99	15	15
	NIS	0.25	% v/v	B	201	0	85	85	99	60	0	10
					304	0	75	10	75	0	0	15
					Mean =	0	86	65	91	53	5	13
3	LOROX+	0.5	lb ai/a	B	103	0	99	99	99	50	99	50
	NIS	0.25	% v/v	B	202	0	95	95	99	5	10	80
					301	0	99	95	85	0	0	85
					Mean =	0	98	96	94	18	36	72
4	LOROX+	1	lb ai/a	B	104	0	99	99	99	0	99	85
	NIS	0.25	% v/v	B	203	0	99	99	99	75	99	99
					302	0	99	99	99	50	99	85
					Mean =	0	99	99	99	42	99	90

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code							CHEAL	OXAST	PLAMA	SONOL	POLPY	CAPBP		
Pest Scientific Name							Chenopodium al>	Oxalis stricta	Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>		
Pest Name							Common lambsqu>	Common yellow >	Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>		
Crop Code							MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	
BBCH Scale							BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	
Crop Scientific Name							Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	
Crop Name							Apple	Apple	Apple	Apple	Apple	Apple	Apple	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	
Rating Date							5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	6/8/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							9 9	9 9	9 9	9 9	9 9	9 9	21 21	
Trt-Eval Interval							1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	3WAT	
Plant-Eval Interval							3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3311 DP-1	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	8	9	10	11	12	13	14		
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0		
					204	0	0	0	0	0	0	0		
					303	0	0	0	0	0	0	0		
					Mean =	0	0	0	0	0	0	0		
2	LOROX+	0.25	lb ai/a	B	102	99	99	99	99	99	99	0		
	NIS	0.25	% v/v	B	201	99	99	0	99	99	99	0		
					304	99	99	99	99	5	99	0		
					Mean =	99	99	66	99	68	99	0		
3	LOROX+	0.5	lb ai/a	B	103	99	99	99	99	99	99	0		
	NIS	0.25	% v/v	B	202	99	99	0	99	99	99	0		
					301	99	99	10	99	99	99	0		
					Mean =	99	99	36	99	99	99	0		
4	LOROX+	1	lb ai/a	B	104	99	99	99	99	99	99	0		
	NIS	0.25	% v/v	B	203	99	99	99	99	99	99	0		
					302	99	99	99	99	99	99	0		
					Mean =	99	99	99	99	99	99	0		

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				STEME	TRFRE	DIGSA	TAROF	POAAN	SENVU	CHEAL
Pest Scientific Name				Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>	Chenopodium al>
Pest Name				Common chickwe>	White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>	Common lambsqu>
Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0
Days After First/Last Applic.				21 21	21 21	21 21	21 21	21 21	21 21	21 21
Trt-Eval Interval				3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	3WAT
Plant-Eval Interval				3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1
Number of Decimals				0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	15	16	17	18	19	20	21
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0
					204	0	0	0	0	0	0	0
					303	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0
2	LOROX+	0.25	lb ai/a	B	102	99	99	99	99	80	25	99
	NIS	0.25	% v/v	B	201	99	85	99	99	70	15	99
					304	99	0	99	99	25	15	99
					Mean =	99	61	99	99	58	18	99
3	LOROX+	0.5	lb ai/a	B	103	99	90	85	60	80	85	99
	NIS	0.25	% v/v	B	202	99	99	99	0	85	80	99
					301	99	85	99	20	70	85	99
					Mean =	99	91	94	27	78	83	99
4	LOROX+	1	lb ai/a	B	104	99	99	99	25	99	90	99
	NIS	0.25	% v/v	B	203	99	99	99	85	95	99	99
					302	99	99	99	60	80	85	99
					Mean =	99	99	99	57	91	91	99

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed		W Weed
Pest Code		OXAST	PLAMA	SONOL	POLPY	CAPBP		STEME
Pest Scientific Name		Oxalis stricta	Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>		Stellaria media
Pest Name		Common yellow >	Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>		Common chickwe>
Crop Code		MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale		BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name		Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name		Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated		WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	WEED -
Rating Date		6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/29/2011	6/29/2011
Rating Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL
Rating Unit		%	%	%	%	%	%	%
Number of Subsamples		0	0	0	0	0	0	0
Days After First/Last Applic.		21 21	21 21	21 21	21 21	21 21	42 42	42 42
Trt-Eval Interval		3WAT	3WAT	3WAT	3WAT	3WAT	6WAT	6WAT
Plant-Eval Interval		3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3332 DP-1	3332 DP-1
Number of Decimals		0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28
1	UNTREATED CONTROL			101	0	0	0	0	0	0	0
				204	0	0	0	0	0	0	0
				303	0	0	0	0	0	0	0
				Mean =	0	0	0	0	0	0	0
2	LOROX+	0.25 lb ai/a	B	102	90	25	99	99	99	0	99
	NIS	0.25 % v/v	B	201	99	60	99	99	99	0	99
				304	99	0	99	5	99	0	99
				Mean =	96	28	99	68	99	0	99
3	LOROX+	0.5 lb ai/a	B	103	99	99	99	99	99	0	99
	NIS	0.25 % v/v	B	202	99	95	99	99	99	0	99
				301	99	15	99	99	99	0	99
				Mean =	99	70	99	99	99	0	99
4	LOROX+	1 lb ai/a	B	104	99	99	99	99	99	0	99
	NIS	0.25 % v/v	B	203	99	99	99	99	99	0	99
				302	99	95	99	99	99	0	99
				Mean =	99	98	99	99	99	0	99

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							TRFRE	DIGSA	TAROF	POAAN	SENVU	CHEAL	OXAST	
Pest Scientific Name							Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>	Chenopodium al>	Oxalis stricta	
Pest Name							White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>	Common lambsqu>	Common yellow >	
Crop Code							MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	
BBCH Scale							BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	
Crop Scientific Name							Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	
Crop Name							Apple	Apple	Apple	Apple	Apple	Apple	Apple	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							42 42	42 42	42 42	42 42	42 42	42 42	42 42	
Trt-Eval Interval							6WAT	6WAT	6WAT	6WAT	6WAT	6WAT	6WAT	
Plant-Eval Interval							3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	29	30	31	32	33	34	35		
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0		
					204	0	0	0	0	0	0	0		
					303	0	0	0	0	0	0	0		
					Mean =	0	0	0	0	0	0	0		
2	LOROX+	0.25	lb ai/a	B	102	85	0	99	0	0	85	70		
	NIS	0.25	% v/v	B	201	50	75	95	75	10	99	99		
					304	25	15	40	15	5	99	99		
					Mean =	53	30	78	30	5	94	89		
3	LOROX+	0.5	lb ai/a	B	103	90	80	90	80	65	99	99		
	NIS	0.25	% v/v	B	202	85	80	15	80	60	99	90		
					301	85	10	50	10	65	99	99		
					Mean =	87	57	52	57	63	99	96		
4	LOROX+	1	lb ai/a	B	104	99	85	75	85	70	99	99		
	NIS	0.25	% v/v	B	203	95	80	90	80	85	99	99		
					302	99	50	90	50	75	99	85		
					Mean =	98	72	85	72	77	99	94		

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code						PLAMA	SONOL	POLPY	CAPBP	ERICA	AMARP
Pest Scientific Name						Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>	Conyza canaden>	Amaranthus rep>
Pest Name						Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>	Canada horsewe>	Amaranthus rep>
Crop Code						MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale						BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name						Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name						Apple	Apple	Apple	Apple	Apple	Apple
Part Rated						WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date						6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
Rating Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%
Number of Subsamples						0	0	0	0	0	0
Days After First/Last Applic.						42 42	42 42	42 42	42 42	42 42	42 42
Trt-Eval Interval						6WAT	6WAT	6WAT	6WAT	6WAT	6WAT
Plant-Eval Interval						3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1
Number of Decimals						0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	36	37	38	39	40	41
1	UNTREATED CONTROL				101	0	99	0	0	0	0
					204	0	0	0	0	0	0
					303	0	0	0	0	0	0
					Mean =	0	33	0	0	0	0
2	LOROX+	0.25	lb ai/a	B	102	0	99	99	99	0	99
	NIS	0.25	% v/v	B	201	10	99	99	99	20	10
					304	0	99	99	99	90	80
					Mean =	3	99	99	99	37	63
3	LOROX+	0.5	lb ai/a	B	103	80	99	99	99	80	99
	NIS	0.25	% v/v	B	202	70	99	99	99	5	50
					301	5	99	99	99	25	99
					Mean =	52	99	99	99	37	83
4	LOROX+	1	lb ai/a	B	104	90	99	99	99	90	99
	NIS	0.25	% v/v	B	203	80	99	99	99	30	60
					302	80	99	99	99	5	99
					Mean =	83	99	99	99	42	86

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
STEME, Stellaria media, = US
TRFRE, Trifolium repens, = US
DIGSA, Digitaria sanguinalis, = US
TAROF, Taraxacum officinale, = US
POAAN, Poa annua, = US
SENVU, Senecio vulgaris, = US
CHEAL, Chenopodium album, = US
OXAST, Oxalis stricta, = US
PLAMA, Plantago major, = US
SONOL, Sonchus oleraceus, = US
CAPBP, Capsella bursa-pastoris, = US
ERICA, Conyza canadensis, = US
AMARP, Amaranthus repens, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
TREE = tree
Rating Unit
% = percent
Plant-Eval Interval
3299 DP-1 = 1 5/15/2002
3311 DP-1 = 1 5/15/2002
3332 DP-1 = 1 5/15/2002

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					STEME	TRFRE	DIGSA	TAROF	POAAN	SENVU
	Pest Scientific Name					Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>
	Pest Name					Common chickwe>	White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated				TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011
	Rating Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				9 9	9 9	9 9	9 9	9 9	9 9	9 9
	Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
	Plant-Eval Interval				3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1
	Number of Decimals				0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 a	0 b	0 b	0 b	0 a	0 b	0 b
2	LOROX+	0.25	lb ai/a	B	0 a	86 a	65 a	91 a	53 a	5 b	13 b
	NIS	0.25	% v/v	B							
3	LOROX+	0.5	lb ai/a	B	0 a	98 a	96 a	94 a	18 a	36 b	72 a
	NIS	0.25	% v/v	B							
4	LOROX+	1	lb ai/a	B	0 a	99 a	99 a	99 a	42 a	99 a	90 a
	NIS	0.25	% v/v	B							
	LSD (P=.05)				0.0	12.2	47.4	13.5	72.5	52.2	20.5
	Standard Deviation				0.0	6.1	23.7	6.8	36.3	26.1	10.3
	CV				0.0	8.62	36.49	9.51	128.52	74.49	23.54
	Bartlett's X2				0.0	3.747	8.811	0.522	0.607	4.409	4.911
	P(Bartlett's X2)				.	0.053	0.003*	0.47	0.738	0.036*	0.086
	Replicate F				0.000	1.048	1.081	2.635	0.568	1.459	1.089
	Replicate Prob(F)				1.0000	0.4071	0.3971	0.1509	0.5942	0.3046	0.3948
	Treatment F				0.000	181.907	11.312	148.235	1.281	9.111	54.212
	Treatment Prob(F)				1.0000	0.0001	0.0070	0.0001	0.3629	0.0119	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code		CHEAL	OXAST	PLAMA	SONOL	POLPY	CAPBP	
Pest Scientific Name		Chenopodium al>	Oxalis stricta	Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>	
Pest Name		Common lambsqu>	Common yellow >	Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>	
Crop Code		MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale		BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name		Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name		Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated		WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -
Rating Date		5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	5/27/2011	6/8/2011
Rating Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY
Rating Unit		%	%	%	%	%	%	%
Number of Subsamples		0	0	0	0	0	0	0
Days After First/Last Applic.		9 9	9 9	9 9	9 9	9 9	9 9	21 21
Trt-Eval Interval		1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	3WAT
Plant-Eval Interval		3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3299 DP-1	3311 DP-1
Number of Decimals		0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate Unit	Appl Code	8	9	10	11	12	13	14
1	UNTREATED CONTROL			0 b	0 b	0 a	0 b	0 b	0 b	0 a
2	LOROX+	0.25 lb ai/a	B	99 a	99 a	66 a	99 a	68 a	99 a	0 a
	NIS	0.25 % v/v	B							
3	LOROX+	0.5 lb ai/a	B	99 a	99 a	36 a	99 a	99 a	99 a	0 a
	NIS	0.25 % v/v	B							
4	LOROX+	1 lb ai/a	B	99 a	99 a	99 a	99 a	99 a	99 a	0 a
	NIS	0.25 % v/v	B							
LSD (P=.05)				0.0	0.0	70.9	0.0	54.2	0.0	0.0
Standard Deviation				0.0	0.0	35.5	0.0	27.1	0.0	0.0
CV				0.0	0.0	70.51	0.0	40.86	0.0	0.0
Bartlett's X2				0.0	0.0	0.004	0.0	0.0	0.0	0.0
P(Bartlett's X2)				.	.	0.948	.	.	.	.
Replicate F				0.000	0.000	1.952	0.000	1.000	0.000	0.000
Replicate Prob(F)				1.0000	1.0000	0.2224	1.0000	0.4219	1.0000	1.0000
Treatment F				0.000	0.000	4.242	0.000	8.877	0.000	0.000
Treatment Prob(F)				1.0000	1.0000	0.0627	1.0000	0.0126	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	STEME	TRFRE	DIGSA	TAROF	POAAN	SENVU	CHEAL
Pest Scientific Name	Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>	Chenopodium al>
Pest Name	Common chickwe>	White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>	Common lambsqu>
Crop Code	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name	Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	0	0	0	0	0	0	0
Days After First/Last Applic.	21 21	21 21	21 21	21 21	21 21	21 21	21 21
Trt-Eval Interval	3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	3WAT
Plant-Eval Interval	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1
Number of Decimals	0	0	0	0	0	0	0
Trt Treatment Name / Rate Unit	Rate Appl Code	15	16	17	18	19	20	21
1 UNTREATED CONTROL		0 b	0 b	0 b	0 b	0 c	0 c	0 b
2 LOROX+	0.25 lb ai/a B	99 a	61 a	99 a	99 a	58 b	18 b	99 a
NIS	0.25 % v/v B							
3 LOROX+	0.5 lb ai/a B	99 a	91 a	94 a	27 b	78 ab	83 a	99 a
NIS	0.25 % v/v B							
4 LOROX+	1 lb ai/a B	99 a	99 a	99 a	57 ab	91 a	91 a	99 a
NIS	0.25 % v/v B							
LSD (P=.05)		0.0	52.4	8.1	49.5	25.4	10.2	0.0
Standard Deviation		0.0	26.2	4.0	24.8	12.7	5.1	0.0
CV		0.0	41.66	5.53	54.32	22.31	10.55	0.0
Bartlett's X2		0.0	5.067	0.0	0.0	3.687	1.303	0.0
P(Bartlett's X2)		.	0.024*	.	0.985	0.158	0.521	.
Replicate F		0.000	1.252	1.000	0.003	3.287	0.550	0.000
Replicate Prob(F)		1.0000	0.3512	0.4219	0.9966	0.1086	0.6036	1.0000
Treatment F		0.000	8.838	436.903	8.826	30.199	243.476	0.000
Treatment Prob(F)		1.0000	0.0128	0.0001	0.0128	0.0005	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		W Weed
Pest Code	OXAST	PLAMA	SONOL	POLPY	CAPBP		STEME
Pest Scientific Name	Oxalis stricta	Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>		Stellaria media
Pest Name	Common yellow >	Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>		Common chickwe>
Crop Code	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name	Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated	WEED -	WEED -	WEED -	WEED -	WEED -	TREE -	WEED -
Rating Date	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/29/2011	6/29/2011
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	0	0	0	0	0	0	0
Days After First/Last Applic.	21 21	21 21	21 21	21 21	21 21	42 42	42 42
Trt-Eval Interval	3WAT	3WAT	3WAT	3WAT	3WAT	6WAT	6WAT
Plant-Eval Interval	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3311 DP-1	3332 DP-1	3332 DP-1
Number of Decimals	0	0	0	0	0	0	0
Trt Treatment Rate Appl No. Name Rate Unit Code	22	23	24	25	26	27	28
1 UNTREATED CONTROL	0 b	0 c	0 b	0 b	0 b	0 a	0 b
2 LOROX+ 0.25 lb ai/a B NIS 0.25 % v/v B	96 a	28 bc	99 a	68 a	99 a	0 a	99 a
3 LOROX+ 0.5 lb ai/a B NIS 0.25 % v/v B	99 a	70 ab	99 a	99 a	99 a	0 a	99 a
4 LOROX+ 1 lb ai/a B NIS 0.25 % v/v B	99 a	98 a	99 a	99 a	99 a	0 a	99 a
LSD (P=.05)	5.2	47.9	0.0	54.2	0.0	0.0	0.0
Standard Deviation	2.6	24.0	0.0	27.1	0.0	0.0	0.0
CV	3.53	48.99	0.0	40.86	0.0	0.0	0.0
Bartlett's X2	0.0	8.417	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)	.	0.015*	.	.	.	.	.
Replicate F	1.000	2.501	0.000	1.000	0.000	0.000	0.000
Replicate Prob(F)	0.4219	0.1622	1.0000	0.4219	1.0000	1.0000	1.0000
Treatment F	1068.000	9.792	0.000	8.877	0.000	0.000	0.000
Treatment Prob(F)	0.0001	0.0100	1.0000	0.0126	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type			W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code			TRFRE	DIGSA	TAROF	POAAN	SENVU	CHEAL	OXAST
Pest Scientific Name			Trifolium repe>	Digitaria sang>	Taraxacum offi>	Poa annua	Senecio vulgar>	Chenopodium al>	Oxalis stricta
Pest Name			White clover	Large crabgrass	Common dandeli>	Annual bluegra>	Common grounds>	Common lambsqu>	Common yellow >
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale			BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name			Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name			Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated			WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date			6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
Rating Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%	%
Number of Subsamples			0	0	0	0	0	0	0
Days After First/Last Applic.			42 42	42 42	42 42	42 42	42 42	42 42	42 42
Trt-Eval Interval			6WAT	6WAT	6WAT	6WAT	6WAT	6WAT	6WAT
Plant-Eval Interval			3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1
Number of Decimals			0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate Unit	Appl Code	29	30	31	32	33	34	35
1	UNTREATED CONTROL			0 c	0 a	0 b	0 a	0 c	0 b	0 b
2	LOROX+	0.25	lb ai/a B	53 b	30 a	78 a	30 a	5 c	94 a	89 a
	NIS	0.25	% v/v B							
3	LOROX+	0.5	lb ai/a B	87 a	57 a	52 ab	57 a	63 b	99 a	96 a
	NIS	0.25	% v/v B							
4	LOROX+	1	lb ai/a B	98 a	72 a	85 a	72 a	77 a	99 a	94 a
	NIS	0.25	% v/v B							
LSD (P=.05)				29.3	51.0	52.7	51.0	9.4	8.1	21.4
Standard Deviation				14.7	25.5	26.4	25.5	4.7	4.0	10.7
CV				24.71	64.55	49.17	64.55	13.0	5.53	15.35
Bartlett's X2				11.84	1.081	3.061	1.081	1.536	0.0	2.439
P(Bartlett's X2)				0.003*	0.583	0.216	0.583	0.464	.	0.295
Replicate F				1.276	2.464	0.691	2.464	1.125	1.000	0.235
Replicate Prob(F)				0.3454	0.1655	0.5368	0.1655	0.3847	0.4219	0.7974
Treatment F				26.771	4.565	6.402	4.565	209.594	436.903	56.790
Treatment Prob(F)				0.0007	0.0543	0.0267	0.0543	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code		PLAMA	SONOL	POLPY	CAPBP	ERICA	AMARP
Pest Scientific Name		Plantago major	Sonchus olerac>	Polygonum pens>	Capsella bursa>	Conyza canaden>	Amaranthus rep>
Pest Name		Broadleaf plan>	Annual sowthis>	Pennsylvania s>	Shepherd's pur>	Canada horsewe>	Amaranthus rep>
Crop Code		MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale		BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name		Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name		Apple	Apple	Apple	Apple	Apple	Apple
Part Rated		WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date		6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
Rating Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit		%	%	%	%	%	%
Number of Subsamples		0	0	0	0	0	0
Days After First/Last Applic.		42 42	42 42	42 42	42 42	42 42	42 42
Trt-Eval Interval		6WAT	6WAT	6WAT	6WAT	6WAT	6WAT
Plant-Eval Interval		3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1	3332 DP-1
Number of Decimals		0	0	0	0	0	0
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	36	37	38	39	40	41
1	UNTREATED CONTROL			0 b	33 a	0 b	0 b	0 a	0 b
2	LOROX+	0.25 lb ai/a	B	3 b	99 a	99 a	99 a	37 a	63 a
	NIS	0.25 % v/v	B						
3	LOROX+	0.5 lb ai/a	B	52 a	99 a	99 a	99 a	37 a	83 a
	NIS	0.25 % v/v	B						
4	LOROX+	1 lb ai/a	B	83 a	99 a	99 a	99 a	42 a	86 a
	NIS	0.25 % v/v	B						
LSD (P=.05)				39.7	57.1	0.0	0.0	80.1	39.0
Standard Deviation				19.9	28.6	0.0	0.0	40.1	19.5
CV				57.48	34.64	0.0	0.0	139.4	33.71
Bartlett's X2				8.346	0.0	0.0	0.0	0.069	1.046
P(Bartlett's X2)				0.015*	.	.	.	0.966	0.593
Replicate F				1.366	1.000	0.000	0.000	0.518	6.192
Replicate Prob(F)				0.3245	0.4219	1.0000	1.0000	0.6204	0.0348
Treatment F				12.251	4.000	0.000	0.000	0.696	12.541
Treatment Prob(F)				0.0057	0.0701	1.0000	1.0000	0.5873	0.0054

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH LOROX

Trial ID: APPLEWCCTLOROX 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Kurt Volker

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
STEME, Stellaria media, = US
TRFRE, Trifolium repens, = US
DIGSA, Digitaria sanguinalis, = US
TAROF, Taraxacum officinale, = US
POAAN, Poa annua, = US
SENVU, Senecio vulgaris, = US
CHEAL, Chenopodium album, = US
OXAST, Oxalis stricta, = US
PLAMA, Plantago major, = US
SONOL, Sonchus oleraceus, = US
CAPBP, Capsella bursa-pastoris, = US
ERICA, Conyza canadensis, = US
AMARP, Amaranthus repens, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
TREE = tree
Rating Unit
% = percent
Plant-Eval Interval
3299 DP-1 = 1 5/15/2002
3311 DP-1 = 1 5/15/2002
3332 DP-1 = 1 5/15/2002

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

General Trial Information

Study Director: Doug Doohan **Title:** Professor; Res.Asssociate
Investigator: Doug Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: F one-year/final **Trial Reliability:** Reliable
Initiation Date: 5/18/2011 **Planned Completion Date:** 10/31/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
Evaluate Spartan Charge and tank-mixes for crop tolerance and weed control under apples. Apply in a bearing orchard in mid-May.Target weeds include grasses, broadleaves such as lambsquarter, morninglories, mugwort, poison ivy , yellow nutsedge and others. Use the appropriate weed control rating timings and note any phytotoxicity.

T**he standard orchard treatment to which the 3 Spartan Charge treatments were compared was Chateau (6 oz/A) + Roundup at 1 qt/A**

Conclusions:
There were 9 weed species present in the trial, and there was no crop injury noted with any of the sprayed treatments.
Of the Spartan Charge treatments, the **Spartan Charge /Solicam combo provided the best weed control significantly equal to the Chateau standard**. The Spartan Charge/Roundup had significantly poorer crabgrass and dandelion control, and the Spartan Charge /Surflan had significantly poorer grounsel control.

Personnel

Study Director: Doug Doohan **Title:** Professor; Res.Asssociate
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Cooperator/Landowner

Cooperator: Bruce Williams **Role:** Farm Manager
Organization: OARDC/ The Ohio State University **Org. Type:** Research
Address 1: 1680 Madison Ave.
Phone No.: 3302633878
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-0412
Postal Code: 44691 **E-mail:** williams.20@osu.edu
Country: USA United States

Crop Description

Crop 1: MABSD Malus domestica Apple
Variety: Golden Delicous **Description:** semi-dwarf
BBCH Scale: BPOM **Planting Date:** 5/15/2003
Planting Method: TRAMAC transplanted - machine
Perennial Age, Unit: 7 YR
Row Spacing, Unit: 10 FT **Spacing Within Row, Unit:** 15 FT
Seed Bed: COMPAC compacted

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Description

Pest 1 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
Description: 0.5-2 IN, 4-12 LF

Pest 2 Type: W **Code:** DIGSS Digitaria sp.
Common Name: Crabgrass
Description: 0.5 IN, 3 LF

Pest 3 Type: W **Code:** OXAST Oxalis stricta
Common Name: Common yellow wood sorrel
Description: 0.5 IN, 4-12 LF

Pest 4 Type: W **Code:** PLAMA Plantago major
Common Name: Broadleaf plantain
Description: 0.5-1 IN , 3 LF

Pest 5 Type: W **Code:** POAAN Poa annua
Common Name: Annual bluegrass
Description: 1-3 IN DIAMETER

Pest 6 Type: W **Code:** SENVU Senecio vulgaris
Common Name: Common groundsel
Description: 0.5-2.5 IN, 4-8 LF

Pest 7 Type: W **Code:** POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed
Description: 1.5-2.5 IN , 4 LF

Pest 8 Type: W **Code:** STEME Stellaria media
Common Name: Common chickweed
Description: 1.5 - 3.5 IN DIAMETER

Pest 9 Type: W **Code:** TARSS Taraxacum sp.
Common Name: Dandelion
Description: 2-3 IN DIAMETER, 2-6 LF

Pest10 Type: W **Code:** TRFSS Trifolium sp.
Common Name: Clover
Description: 0.5 IN, 1-2 LF

Site and Design

Plot Width, Unit: 6 FT **Site Type:** FIELD field
Plot Length, Unit: 20 FT PLOT plot
Plot Area, Unit: 120 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
% Slope: 0.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Field Prep./Maintenance:
Trial was maintained by the OARDC Horticulture/Crop Science Farm Manager as outlined in the 2011 OSU Tree Fruit Spray Guide.

Soil Description

Description Name: SILT LOAM
% Sand: 16 **% OM:** 3.0 **Texture:** SIL silt loam
% Silt: 72 **pH:** 6.0 **Soil Name:** WOOSTER SILT LOAM
% Clay: 12 **CEC:** 14 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC MAIN CAMPUS **Distance, Unit:** 4 MI

Application Description

	A
Application Date:	5/18/2011
Time of Day:	4:00 PM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BRODIR
Applied By:	TIM KOCH
Air Temperature, Unit:	63.0 F
% Relative Humidity:	81.9
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	62 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Rain Occurred On:	5/23/2011

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	MABSD BPOM
Stage Scale Used:	BLOOM
Height, Unit:	8 FT

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	CHEAL W POST

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Stage Majority, Percent:	VEGET 80
Height, Unit:	1.5 IN
Height Minimum, Maximum:	0.5 2.5
Density, Unit:	10 M2
Pest 2 Code, Type, Scale:	DIGSS W POST
Stage Majority, Percent:	VEGET 80
Height, Unit:	0.5 IN
Height Minimum, Maximum:	0.5 1
Density, Unit:	25 M2
Pest 3 Code, Type, Scale:	OXAST W POST
Stage Majority, Percent:	VEGET 80
Diameter, Unit:	2 IN
Height, Unit:	0.5 IN
Density, Unit:	25 M2
Pest 4 Code, Type, Scale:	PLAMA W POST
Stage Majority, Percent:	VEGET 80
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1
Density, Unit:	4 M2
Pest 5 Code, Type, Scale:	POAAN W POST
Stage Majority, Percent:	VEGET 80
Diameter, Unit:	2 IN
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1
Density, Unit:	8 M2
Pest 6 Code, Type, Scale:	SENVU W POST
Stage Majority, Percent:	VEGET 80
Diameter, Unit:	3.5 IN
Height, Unit:	2.5 IN
Density, Unit:	40 M2
Pest 7 Code, Type, Scale:	POLPY W POST
Stage Majority, Percent:	VEGET 80
Height, Unit:	1 IN
Height Minimum, Maximum:	1 2.5
Density, Unit:	20 M2
Pest 8 Code, Type, Scale:	STEME W POST
Stage Majority, Percent:	VEGET 80

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Diameter, Unit:	2.5 IN
Density, Unit:	20 M2
Pest 9 Code, Type, Scale:	TARSS W POST
Stage Majority, Percent:	VEGET 80
Diameter, Unit:	2.5 IN
Density, Unit:	5 M2
Pest10 Code, Type, Scale:	TRFSS W POST
Stage Majority, Percent:	VEGET 80
Height, Unit:	0.5 IN
Density, Unit:	10 M2

Application Equipment

	A
Appl. Equipment:	SPRAY
Equipment Type:	BACKPA
Operation Pressure, Unit:	40 PSI
Nozzle Type:	FLATFAN
Nozzle Size:	8001VS
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 IN
Spray Volume, Unit:	10 gal/ac
Mix Size, Unit:	1 liters
Propellant:	CO2

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Reps: 4 Appl Code: B Plots: 6 by 20 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .45884)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	CHATEAU+	51	%W/W	WG	0.191	lb ai/a	POST	B	4.488 g/mx	102	201	302	403
	ROUNDUP WEATHERMAX	5.5	LB/GAL	L	1.38	lb ai/a	POST	B	25.09 ml/mx				
3	SPARTAN CHARGE+	3.5	LB/GAL	SE	0.273	lb ai/a	POST	B	7.799 ml/mx	103	204	303	402
	ROUNDUP WEATHERMAX	5.5	LB/GAL	L	1.38	lb ai/a	POST	B	25.09 ml/mx				
4	SPARTAN CHARGE+	3.5	LB/GAL	SE	0.273	lb ai/a	POST	B	7.799 ml/mx	104	202	305	404
	SURFLAN+	4	LB/GAL	SC	2	lb ai/a	POST	B	49.99 ml/mx				
	ROUNDUP WEATHERMAX	5.5	LB/GAL	L	1.38	lb ai/a	POST	B	25.09 ml/mx				
5	SPARTAN CHARGE+	3.5	LB/GAL	SE	0.273	lb ai/a	POST	B	7.799 ml/mx	105	203	301	405
	SOLICAM+	78.6	%W/W	WG	1.97	lb ai/a	POST	B	30.03 g/mx				
	ROUNDUP WEATHERMAX	5.5	LB/GAL	L	1.38	lb ai/a	POST	B	25.09 ml/mx				

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Reps: 4 Appl Code: _ Plots: 6 by 20 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .45884)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL									101	205	304	401

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
5.609	g	CHATEAU+	51	WG	
125.441	ml	ROUNDUP WEATHERMAX	5.5	L	
29.247	ml	SPARTAN CHARGE+	3.5	SE	
62.493	ml	SURFLAN+	4	SC	
37.541	g	SOLICAM+	78.6	WG	

* 'Per area' calculations based on spray volume= 10 gal/ac, mix size= 1 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.POME.11.JPR.01
Study Director: DOUG DOOHAN
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Rep	Blk										
4	4	401	1	402	3	403	2	404	4	405	5
3	3	301	5	302	2	303	3	304	1	305	4
2	2	201	2	202	4	203	5	204	3	205	1
1	1	101	1	102	2	103	3	104	4	105	5

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	1	2	3	4	5	6	7
	Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code						POAAN	STEME	TRFRE	DIGSA	TAROF	SENVU
	Pest Scientific Name						Poa annua	Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>
	Pest Name						Annual bluegra>	Common chickwe>	White clover	Large crabgrass	Common dandeli>	Common grounds>
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated					TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011
	Rating Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit						%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					7 7	7 7	7 7	7 7	7 7	7 7	7 7
	Trt-Eval Interval					1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
	Plant-Eval Interval					2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	CHATEAU+	0.191	lb ai/a	B	102	0.0	99.0	99.0	95.0	99.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	201	0.0	99.0	99.0	95.0	99.0	99.0	99.0
					302	0.0	99.0	99.0	90.0	99.0	95.0	99.0
					403	0.0	99.0	99.0	95.0	99.0	99.0	99.0
					Mean =	0.0	99.0	99.0	93.8	99.0	98.0	99.0
3	SPARTAN CHARGE+	0.273	lb ai/a	B	103	0.0	99.0	99.0	85.0	99.0	85.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	204	0.0	99.0	99.0	85.0	99.0	85.0	99.0
					303	0.0	99.0	99.0	95.0	99.0	90.0	99.0
					402	0.0	99.0	99.0	99.0	99.0	95.0	95.0
					Mean =	0.0	99.0	99.0	91.0	99.0	88.8	98.0
4	SPARTAN CHARGE+	0.273	lb ai/a	B	104	0.0	99.0	99.0	95.0	99.0	90.0	99.0
	SURFLAN+	2	lb ai/a	B	202	0.0	99.0	99.0	90.0	99.0	90.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	305	0.0	99.0	99.0	95.0	99.0	95.0	95.0
					404	0.0	99.0	99.0	90.0	99.0	90.0	95.0
					Mean =	0.0	99.0	99.0	92.5	99.0	91.3	97.0
5	SPARTAN CHARGE+	0.273	lb ai/a	B	105	0.0	99.0	99.0	95.0	99.0	95.0	99.0
	SOLICAM+	1.97	lb ai/a	B	203	0.0	99.0	99.0	90.0	99.0	85.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	301	0.0	99.0	99.0	80.0	99.0	98.0	99.0
					405	0.0	99.0	99.0	90.0	99.0	90.0	95.0
					Mean =	0.0	99.0	99.0	88.8	99.0	92.0	98.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Type							W Weed	W Weed	W Weed	W Weed		W Weed	W Weed
Pest Code							CHEAL	PLAMA	SONOL	OXAST		POAAN	STEME
Pest Scientific Name							Chenopodium al>	Plantago major	Sonchus olerac>	Oxalis stricta		Poa annua	Stellaria media
Pest Name							Common lambsqu>	Broadleaf plan>	Annual sowthis>	Common yellow >		Annual bluegra>	Common chickwe>
Crop Code							MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
BBCH Scale							BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
Crop Scientific Name							Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
Crop Name							Apple	Apple	Apple	Apple	Apple	Apple	Apple
Part Rated							WEED -	WEED -	WEED -	WEED -	TREE -	WEED -	WEED -
Rating Date							5/25/2011	5/25/2011	5/25/2011	5/25/2011	6/8/2011	6/8/2011	6/8/2011
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
Rating Unit							%	%	%	%	%	%	%
Number of Subsamples							0	0	0	0	0	0	0
Days After First/Last Applic.							7 7	7 7	7 7	7 7	21 21	21 21	21 21
Trt-Eval Interval							1WAT	1WAT	1WAT	1WAT	3WAT	3WAT	3WAT
Plant-Eval Interval							2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2946 DP-1	2946 DP-1	2946 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	8	9	10	11	12	13	14
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	CHATEAU+	0.191	lb ai/a	B	102	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	201	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					302	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					403	99.0	99.0	99.0	99.0	0.0	0.0	100.0
					Mean =	99.0	99.0	99.0	99.0	0.0	74.3	99.3
3	SPARTAN CHARGE+	0.273	lb ai/a	B	103	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	204	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					303	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					402	99.0	99.0	99.0	99.0	0.0	95.0	99.0
					Mean =	99.0	99.0	99.0	99.0	0.0	98.0	99.0
4	SPARTAN CHARGE+	0.273	lb ai/a	B	104	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	SURFLAN+	2	lb ai/a	B	202	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	305	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					404	99.0	99.0	99.0	99.0	0.0	90.0	99.0
					Mean =	99.0	99.0	99.0	99.0	0.0	96.8	99.0
5	SPARTAN CHARGE+	0.273	lb ai/a	B	105	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	SOLICAM+	1.97	lb ai/a	B	203	99.0	99.0	99.0	99.0	0.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	301	99.0	99.0	99.0	99.0	0.0	99.0	99.0
					405	99.0	99.0	99.0	99.0	0.0	90.0	99.0
					Mean =	99.0	99.0	99.0	99.0	0.0	96.8	99.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							TRFRE	DIGSA	TAROF	SENVU	CHEAL	PLAMA	OXAST	
Pest Scientific Name							Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>	Chenopodium al>	Plantago major	Oxalis stricta	
Pest Name							White clover	Large crabgrass	Common dandeli>	Common grounds>	Common lambsqu>	Broadleaf plan>	Common yellow >	
Crop Code							MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	
BBCH Scale							BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	
Crop Scientific Name							Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	
Crop Name							Apple	Apple	Apple	Apple	Apple	Apple	Apple	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							21 21	21 21	21 21	21 21	21 21	21 21	21 21	
Trt-Eval Interval							3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	
Plant-Eval Interval							2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	15	16	17	18	19	20	21		
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					304	0.0	99.0	0.0	0.0	0.0	0.0	0.0		
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					Mean =	0.0	24.8	0.0	0.0	0.0	0.0	0.0		
2	CHATEAU+	0.191	lb ai/a	B	102	98.0	98.0	99.0	99.0	99.0	99.0	99.0		
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	201	95.0	85.0	85.0	99.0	99.0	99.0	99.0		
					302	95.0	99.0	85.0	99.0	99.0	99.0	99.0		
					403	100.0	95.0	0.0	0.0	0.0	99.0	0.0		
					Mean =	97.0	94.3	67.3	74.3	74.3	99.0	74.3		
3	SPARTAN CHARGE+	0.273	lb ai/a	B	103	85.0	85.0	85.0	99.0	99.0	99.0	99.0		
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	204	85.0	70.0	70.0	99.0	99.0	99.0	99.0		
					303	95.0	95.0	99.0	99.0	99.0	99.0	99.0		
					402	99.0	95.0	95.0	99.0	99.0	99.0	99.0		
					Mean =	91.0	86.3	87.3	99.0	99.0	99.0	99.0		
4	SPARTAN CHARGE+	0.273	lb ai/a	B	104	85.0	80.0	80.0	99.0	99.0	99.0	95.0		
	SURFLAN+	2	lb ai/a	B	202	99.0	95.0	95.0	99.0	99.0	99.0	99.0		
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	305	95.0	95.0	95.0	99.0	99.0	99.0	99.0		
					404	99.0	90.0	90.0	85.0	99.0	99.0	99.0		
					Mean =	94.5	90.0	90.0	95.5	99.0	99.0	98.0		
5	SPARTAN CHARGE+	0.273	lb ai/a	B	105	95.0	95.0	95.0	99.0	99.0	99.0	99.0		
	SOLICAM+	1.97	lb ai/a	B	203	85.0	95.0	70.0	99.0	99.0	99.0	99.0		
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	301	85.0	85.0	90.0	99.0	99.0	99.0	99.0		
					405	85.0	85.0	85.0	99.0	99.0	99.0	99.0		
					Mean =	87.5	90.0	85.0	99.0	99.0	99.0	99.0		

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	22	23	24	25	26	27	28
	Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code						POAAN	STEME	TRFRE	DIGSA	TAROF	SENVU
	Pest Scientific Name						Poa annua	Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>
	Pest Name						Annual bluegra>	Common chickwe>	White clover	Large crabgrass	Common dandeli>	Common grounds>
	Crop Code					MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale					BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name					Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated					TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
	Rating Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					42 42	42 42	42 42	42 42	42 42	42 42	42 42
	Trt-Eval Interval					6WAT	6WAT	6WAT	6WAT	6WAT	6WAT	6WAT
	Plant-Eval Interval					2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	CHATEAU+	0.191	lb ai/a	B	102	0.0	99.0	99.0	85.0	95.0	95.0	90.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	201	0.0	75.0	99.0	90.0	99.0	70.0	85.0
					302	0.0	99.0	99.0	90.0	99.0	90.0	90.0
					403	0.0	99.0	99.0	90.0	95.0	95.0	90.0
					Mean =	0.0	93.0	99.0	88.8	97.0	87.5	88.8
3	SPARTAN CHARGE+	0.273	lb ai/a	B	103	0.0	60.0	99.0	75.0	90.0	30.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	204	0.0	95.0	99.0	80.0	70.0	10.0	99.0
					303	0.0	99.0	99.0	90.0	65.0	15.0	99.0
					402	0.0	99.0	99.0	90.0	70.0	20.0	80.0
					Mean =	0.0	88.3	99.0	83.8	73.8	18.8	94.3
4	SPARTAN CHARGE+	0.273	lb ai/a	B	104	0.0	99.0	99.0	80.0	99.0	0.0	5.0
	SURFLAN+	2	lb ai/a	B	202	0.0	90.0	99.0	90.0	99.0	15.0	85.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	305	0.0	99.0	99.0	95.0	99.0	10.0	85.0
					404	0.0	70.0	99.0	85.0	99.0	40.0	30.0
					Mean =	0.0	89.5	99.0	87.5	99.0	16.3	51.3
5	SPARTAN CHARGE+	0.273	lb ai/a	B	105	0.0	90.0	99.0	90.0	90.0	95.0	99.0
	SOLICAM+	1.97	lb ai/a	B	203	0.0	99.0	99.0	95.0	99.0	20.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	301	0.0	90.0	99.0	80.0	90.0	90.0	80.0
					405	0.0	99.0	99.0	65.0	95.0	95.0	90.0
					Mean =	0.0	94.5	99.0	82.5	93.5	75.0	92.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Type					W Weed	W Weed	W Weed
Pest Code					CHEAL	PLAMA	OXAST
Pest Scientific Name					Chenopodium al>	Plantago major	Oxalis stricta
Pest Name					Common lambsqu>	Broadleaf plan>	Common yellow >
Crop Code					MABSD	MABSD	MABSD
BBCH Scale					BPOM	BPOM	BPOM
Crop Scientific Name					Malus domestica	Malus domestica	Malus domestica
Crop Name					Apple	Apple	Apple
Part Rated					WEED -	WEED -	WEED -
Rating Date					6/29/2011	6/29/2011	6/29/2011
Rating Type					CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%
Number of Subsamples					0	0	0
Days After First/Last Applic.					42 42	42 42	42 42
Trt-Eval Interval					6WAT	6WAT	6WAT
Plant-Eval Interval					2967 DP-1	2967 DP-1	2967 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	29	30	31
1	UNTREATED CONTROL				101	0.0	0.0	0.0
					205	0.0	0.0	0.0
					304	0.0	0.0	0.0
					401	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0
2	CHATEAU+	0.191	lb ai/a	B	102	99.0	99.0	99.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	201	99.0	99.0	70.0
					302	99.0	99.0	99.0
					403	99.0	99.0	99.0
					Mean =	99.0	99.0	91.8
3	SPARTAN CHARGE+	0.273	lb ai/a	B	103	99.0	99.0	85.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	204	99.0	99.0	99.0
					303	99.0	99.0	90.0
					402	99.0	99.0	99.0
					Mean =	99.0	99.0	93.3
4	SPARTAN CHARGE+	0.273	lb ai/a	B	104	99.0	99.0	99.0
	SURFLAN+	2	lb ai/a	B	202	99.0	99.0	90.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	305	99.0	99.0	99.0
					404	99.0	99.0	95.0
					Mean =	99.0	99.0	95.8
5	SPARTAN CHARGE+	0.273	lb ai/a	B	105	99.0	99.0	95.0
	SOLICAM+	1.97	lb ai/a	B	203	99.0	99.0	90.0
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B	301	99.0	99.0	90.0
					405	99.0	99.0	80.0
					Mean =	99.0	99.0	88.8

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.POME.11.JPR.01
Study Director: DOUG DOOHAN
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
POAAN, Poa annua, = US
STEME, Stellaria media, = US
TRFRE, Trifolium repens, = US
DIGSA, Digitaria sanguinalis, = US
TAROF, Taraxacum officinale, = US
SENVU, Senecio vulgaris, = US
CHEAL, Chenopodium album, = US
PLAMA, Plantago major, = US
SONOL, Sonchus oleraceus, = US
OXAST, Oxalis stricta, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
TREE = tree
Rating Unit
% = percent
Plant-Eval Interval
2932 DP-1 = 1 5/15/2003
2946 DP-1 = 1 5/15/2003
2967 DP-1 = 1 5/15/2003

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					POAAN	STEME	TRFRE	DIGSA	TAROF	SENVU
	Pest Scientific Name					Poa annua	Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>
	Pest Name					Annual bluegra>	Common chickwe>	White clover	Large crabgrass	Common dandeli>	Common grounds>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated				TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011
	Rating Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				7 7	7 7	7 7	7 7	7 7	7 7	7 7
	Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
	Plant-Eval Interval				2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1
1	UNTREATED CONTROL				0.0 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b
2	CHATEAU+	0.191	lb ai/a	B	0.0 a	99.0 a	99.0 a	93.8 a	99.0 a	98.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
3	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	99.0 a	99.0 a	91.0 a	99.0 a	88.8 b	98.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
4	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	99.0 a	99.0 a	92.5 a	99.0 a	91.3 ab	97.0 a
	SURFLAN+	2	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
5	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	99.0 a	99.0 a	88.8 a	99.0 a	92.0 ab	98.0 a
	SOLICAM+	1.97	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
	LSD (P=.05)				0.00	0.00	0.00	7.50	0.00	5.57	2.03
	Standard Deviation				0.00	0.00	0.00	4.87	0.00	3.62	1.32
	CV				0.0	0.0	0.0	6.65	0.0	4.89	1.68
	Bartlett's X2				0.0	0.0	0.0	4.175	0.0	3.783	0.08
	P(Bartlett's X2)				.	.	.	0.243	.	0.286	0.961
	Replicate F				0.000	0.000	0.000	0.428	0.000	1.029	3.692
	Replicate Prob(F)				1.0000	1.0000	1.0000	0.7366	1.0000	0.4146	0.0431
	Treatment F				0.000	0.000	0.000	283.492	0.000	526.375	4433.769
	Treatment Prob(F)				1.0000	1.0000	1.0000	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	8	9	10	11	12	13	14
	Pest Type				W Weed	W Weed	W Weed	W Weed		W Weed	W Weed
	Pest Code				CHEAL	PLAMA	SONOL	OXAST		POAAN	STEME
	Pest Scientific Name				Chenopodium al>	Plantago major	Sonchus olerac>	Oxalis stricta		Poa annua	Stellaria media
	Pest Name				Common lambsqu>	Broadleaf plan>	Annual sowthis>	Common yellow >		Annual bluegra>	Common chickwe>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated				WEED -	WEED -	WEED -	WEED -	TREE -	WEED -	WEED -
	Rating Date				5/25/2011	5/25/2011	5/25/2011	5/25/2011	6/8/2011	6/8/2011	6/8/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				7 7	7 7	7 7	7 7	21 21	21 21	21 21
	Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	3WAT	3WAT	3WAT
	Plant-Eval Interval				2932 DP-1	2932 DP-1	2932 DP-1	2932 DP-1	2946 DP-1	2946 DP-1	2946 DP-1
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b	0.0 b	0.0 a	0.0 b	0.0 b
2	CHATEAU+	0.191	lb ai/a	B	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a	74.3 a	99.3 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
3	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a	98.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
4	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a	96.8 a	99.0 a
	SURFLAN+	2	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
5	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	99.0 a	99.0 a	0.0 a	96.8 a	99.0 a
	SOLICAM+	1.97	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
	LSD (P=.05)				0.00	0.00	0.00	0.00	0.00	32.34	0.34
	Standard Deviation				0.00	0.00	0.00	0.00	0.00	20.99	0.22
	CV				0.0	0.0	0.0	0.0	0.0	28.7	0.28
	Bartlett's X2				0.0	0.0	0.0	0.0	0.0	29.177	0.0
	P(Bartlett's X2)				.	.	.	.	.	0.001*	.
	Replicate F				0.000	0.000	0.000	0.000	0.000	1.661	1.000
	Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.2279	0.4262
	Treatment F				0.000	0.000	0.000	0.000	0.000	16.074	157015.016
	Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	15	16	17	18	19	20	21
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				TRFRE	DIGSA	TAROF	SENVU	CHEAL	PLAMA	OXAST
	Pest Scientific Name				Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>	Chenopodium al>	Plantago major	Oxalis stricta
	Pest Name				White clover	Large crabgrass	Common dandeli>	Common grounds>	Common lambsqu>	Broadleaf plan>	Common yellow >
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				21 21	21 21	21 21	21 21	21 21	21 21	21 21
	Trt-Eval Interval				3WAT	3WAT	3WAT	3WAT	3WAT	3WAT	3WAT
	Plant-Eval Interval				2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1	2946 DP-1
1	UNTREATED CONTROL				0.0 b	24.8 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	CHATEAU+	0.191	lb ai/a	B	97.0 a	94.3 a	67.3 a	74.3 a	74.3 a	99.0 a	74.3 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
3	SPARTAN CHARGE+	0.273	lb ai/a	B	91.0 a	86.3 a	87.3 a	99.0 a	99.0 a	99.0 a	99.0 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
4	SPARTAN CHARGE+	0.273	lb ai/a	B	94.5 a	90.0 a	90.0 a	95.5 a	99.0 a	99.0 a	98.0 a
	SURFLAN+	2	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
5	SPARTAN CHARGE+	0.273	lb ai/a	B	87.5 a	90.0 a	85.0 a	99.0 a	99.0 a	99.0 a	99.0 a
	SOLICAM+	1.97	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
	LSD (P=.05)				8.02	34.59	34.31	33.23	34.11	0.00	34.25
	Standard Deviation				5.21	22.45	22.27	21.57	22.14	0.00	22.23
	CV				7.03	29.14	33.79	29.32	29.81	0.0	30.02
	Bartlett's X2				2.953	20.633	11.493	7.448	0.0	0.0	14.617
	P(Bartlett's X2)				0.399	0.001*	0.009*	0.006*	.	.	0.001*
	Replicate F				0.625	1.385	0.815	1.372	1.000	0.000	0.967
	Replicate Prob(F)				0.6125	0.2947	0.5099	0.2983	0.4262	1.0000	0.4402
	Treatment F				254.483	6.848	11.590	15.450	15.000	0.000	14.777
	Treatment Prob(F)				0.0001	0.0041	0.0004	0.0001	0.0001	1.0000	0.0001

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The Ohio State University

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Trial ID: APPSPARTANCHARGEW 2011 Protocol ID: SULF.POME.11.JPR.01
Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Unit	Appl Code	22	23	24	25	26	27	28
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					POAAN	STEME	TRFRE	DIGSA	TAROF	SENVU
	Pest Scientific Name					Poa annua	Stellaria media	Trifolium repe>	Digitaria sang>	Taraxacum offi>	Senecio vulgar>
	Pest Name					Annual bluegra>	Common chickwe>	White clover	Large crabgrass	Common dandeli>	Common grounds>
	Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM	BPOM	BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple	Apple	Apple	Apple	Apple
	Part Rated				TREE -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
	Rating Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0
	Days After First/Last Applic.				42 42	42 42	42 42	42 42	42 42	42 42	42 42
	Trt-Eval Interval				6WAT	6WAT	6WAT	6WAT	6WAT	6WAT	6WAT
	Plant-Eval Interval				2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1	2967 DP-1
1	UNTREATED CONTROL				0.0 a	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c
2	CHATEAU+	0.191	lb ai/a	B	0.0 a	93.0 a	99.0 a	88.8 a	97.0 a	87.5 a	88.8 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
3	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	88.3 a	99.0 a	83.8 a	73.8 b	18.8 b	94.3 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
4	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	89.5 a	99.0 a	87.5 a	99.0 a	16.3 b	51.3 b
	SURFLAN+	2	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
5	SPARTAN CHARGE+	0.273	lb ai/a	B	0.0 a	94.5 a	99.0 a	82.5 a	93.5 a	75.0 a	92.0 a
	SOLICAM+	1.97	lb ai/a	B							
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B							
	LSD (P=.05)				0.00	19.82	0.00	11.87	8.80	26.45	29.56
	Standard Deviation				0.00	12.87	0.00	7.71	5.71	17.17	19.19
	CV				0.0	17.61	0.0	11.25	7.86	43.47	29.41
	Bartlett's X2				0.0	3.802	0.0	6.162	6.374	6.747	17.464
	P(Bartlett's X2)				.	0.284	.	0.104	0.041*	0.08	0.001*
	Replicate F				0.000	0.327	0.000	0.702	0.517	2.290	0.893
	Replicate Prob(F)				1.0000	0.8057	1.0000	0.5689	0.6785	0.1304	0.4727
	Treatment F				0.000	40.455	0.000	99.232	214.761	20.678	17.826
	Treatment Prob(F)				1.0000	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001

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Location: Wooster, Ohio Study Director: DOUG DOOHAN
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	29	30	31
	Pest Type				W Weed	W Weed	W Weed
	Pest Code				CHEAL	PLAMA	OXAST
	Pest Scientific Name				Chenopodium al>	Plantago major	Oxalis stricta
	Pest Name				Common lambsqu>	Broadleaf plan>	Common yellow >
	Crop Code				MABSD	MABSD	MABSD
	BBCH Scale				BPOM	BPOM	BPOM
	Crop Scientific Name				Malus domestica	Malus domestica	Malus domestica
	Crop Name				Apple	Apple	Apple
	Part Rated				WEED -	WEED -	WEED -
	Rating Date				6/29/2011	6/29/2011	6/29/2011
	Rating Type				CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%
	Number of Subsamples				0	0	0
	Days After First/Last Applic.				42 42	42 42	42 42
	Trt-Eval Interval				6WAT	6WAT	6WAT
	Plant-Eval Interval				2967 DP-1	2967 DP-1	2967 DP-1
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b
2	CHATEAU+	0.191	lb ai/a	B	99.0 a	99.0 a	91.8 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B			
3	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	93.3 a
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B			
4	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	95.8 a
	SURFLAN+	2	lb ai/a	B			
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B			
5	SPARTAN CHARGE+	0.273	lb ai/a	B	99.0 a	99.0 a	88.8 a
	SOLICAM+	1.97	lb ai/a	B			
	ROUNDUP WEATHERMAX	1.38	lb ai/a	B			
	LSD (P=.05)				0.00	0.00	12.84
	Standard Deviation				0.00	0.00	8.33
	CV				0.0	0.0	11.28
	Bartlett's X2				0.0	0.0	4.638
	P(Bartlett's X2)				.	.	0.20
	Replicate F				0.000	0.000	0.554
	Replicate Prob(F)				1.0000	1.0000	0.6554
	Treatment F				0.000	0.000	98.640
	Treatment Prob(F)				1.0000	1.0000	0.0001

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE TANK-MIXES

Trial ID: APPSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.POME.11.JPR.01
Study Director: DOUG DOOHAN
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: JOE REED

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
POAAN, Poa annua, = US
STEME, Stellaria media, = US
TRFRE, Trifolium repens, = US
DIGSA, Digitaria sanguinalis, = US
TAROF, Taraxacum officinale, = US
SENVU, Senecio vulgaris, = US
CHEAL, Chenopodium album, = US
PLAMA, Plantago major, = US
SONOL, Sonchus oleraceus, = US
OXAST, Oxalis stricta, = US
Crop Code
MABSD, BPOM, Malus domestica, = US
Part Rated
TREE = tree
Rating Unit
% = percent
Plant-Eval Interval
2932 DP-1 = 1 5/15/2003
2946 DP-1 = 1 5/15/2003
2967 DP-1 = 1 5/15/2003

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Investigator: Dr. Douglas J. Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: M multi-year/interim **Trial Reliability:** RELIABLE
Initiation Date: 5/31/2011 **Planned Completion Date:** 10/30/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:

The objectives are twofold:

1) Efficacy of 2 aminocycolpyr products at 2 rates each

2) Crop safety of aminocyclopyr product

The "**local standard**" for this trial was Crossbow at 6qts/A

The " **crop**" is pasture grasses, (roughstem bluegrass, orchardgrass, timothy, and velvetgrass0.

The "**target weed**" is wild blackberry. We had each rep in a different area to get the highest bramble density for the trial.

Crop Injury and weed control were assessed visually. The 0-100 linear scale was used , in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

Conclusions:

Conclusions;
Treatments #4 & #5, RDQ 4 and 8 oz/A respectively, had excellent bramble control, **but appeared to injure timothy and orchardgrass early on (at 30 and 60DAT), especially the 8 oz/A rat**e. The injury was not visible at 90DAT.

The two MAT28 + 2, 4-D, (treatments 2 and 3) exhibited no crop injury, but the bramble control **was significantly lower** compared to the Crossbow local standard.

The bramble control was not significantly different among the Matrix and RDQ treatments. The trial will be rated again in the spring.

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BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu, koch.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Dr. Douglas J. Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan .1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

Cooperator/Landowner

Cooperator: Lynn Ault **Role:** Farm Manager
Organization: OARDC/ The Ohio State University **Org. Type:** Research
Address 1: 1680 Madison Ave.
Phone No.: 330-262-3178
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-2440
Postal Code: 46691 **E-mail:** ault.2@osu.edu
Country: USA United States

Crop Description

Crop 1: YNIGF Grassland not used in agric. Grassland not used in agric.
Variety: various species **Description:** Hilly (old pasture)
Seed Bed: COMPAC compacted

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BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Description

Pest 1 Type: W **Code:** ACHDI Achillea distans
Common Name: Tansyleaf milfoil
Description: 8-18"

Pest 2 Type: W **Code:** ASTPI Symphyotrichum pilosum
Common Name: White heath aster
Description: 12-15" tall

Pest 3 Type: O **Code:** DACGL Dactylis glomerata
Common Name: Orchard grass
Description: bloom; 1-3' tall

Pest 4 Type: W **Code:** DAUCA Daucus carota
Common Name: Wild carrot
Description: 10-18" tall

Pest 5 Type: O **Code:** HOLLA Holcus lanatus
Common Name: Common velvet grass
Description: 10-15" tall

Pest 6 Type: O **Code:** PHLPR Phleum pratense
Common Name: Timothy
Description: bloom; 1-3' tall

Pest 7 Type: O **Code:** POATR Poa trivialis
Common Name: Rough-stalk bluegrass
Description: 1-2' tall

Pest 8 Type: W **Code:** ROSMU Rosa multiflora
Common Name: Multiflora rose
Description: 1-3' tall

Pest 9 Type: W **Code:** RUBFR Rubus fruticosus
Common Name: European blackberry
Description: 3-4' tall; blooming

Pest10 Type: W **Code:** SOOCA Solidago canadensis
Common Name: Canadian goldenrod
Description: 1-2' tall

Pest11 Type: W **Code:** TRFPR Trifolium pratense
Common Name: Red clover
Description: 6-8"tall

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BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Site and Design

Plot Width, Unit: 5 FT **Site Type:** PASTUR pasture
Plot Length, Unit: 25 FT PLOT plot
Plot Area, Unit: 125 FT2 **Tillage Type:** NONE conventional-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:
NONE

Soil Description

Description Name: HILLY (OLD) PASTURE
% Sand: 11 **% OM:** 2.5 **Texture:** SIL silt loam
% Silt: 75 **pH:** 4.97 **Soil Name:** Canfield Silt Loam
% Clay: 14 **CEC:** 13.9 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 2 MI

Application Description

	A
Application Date:	5/31/2011
Time of Day:	11:00 AM
Application Method:	SPRAY
Application Timing:	BLOOM
Application Placement:	BROADCAST
Applied By:	TIM KOCH
Air Temperature, Unit:	87.8
% Relative Humidity:	72.7
Wind Velocity, Unit:	2.6 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	73.1 F
Soil Moisture:	SLIWET
% Cloud Cover:	0
Next Rain Occurred On:	6/4/2011

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BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	YNIGF
Height, Unit:	4 FT
Height Minimum, Maximum:	3

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ACHDI W
IN	
Height Minimum, Maximum:	8 30
Density, Unit:	1 PLA/m2
Pest 2 Code, Type, Scale:	ASTPI W
IN	
Height Minimum, Maximum:	12 15
Density, Unit:	1 PLA/m2
Pest 3 Code, Type, Scale:	DACGL O
FT	
Height Minimum, Maximum:	1 18
Density, Unit:	1 PLA/m2
Pest 4 Code, Type, Scale:	DAUCA W
IN	
Height Minimum, Maximum:	10 18
Density, Unit:	1 PLA/m2
Pest 5 Code, Type, Scale:	HOLLA O
IN	
Height Minimum, Maximum:	10 15
Density, Unit:	6 PLA/m2
Pest 6 Code, Type, Scale:	PHLPR O
IN	
Height Minimum, Maximum:	10 15
Density, Unit:	6 PLA/m2
Pest 7 Code, Type, Scale:	POATR O
FT	
Height Minimum, Maximum:	1 2
Density, Unit:	6 PLA/m2
Pest 8 Code, Type, Scale:	ROSMU W

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BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

FT	
Height Minimum, Maximum:	1 3
Density, Unit:	2 PLA/m2
Pest 9 Code, Type, Scale:	RUBFR W
FT	
Height Minimum, Maximum:	3 4
Density, Unit:	6 PLA/m2
Pest10 Code, Type, Scale:	SOOCA W
FT	
Height Minimum, Maximum:	1 2
Density, Unit:	1 PLA/m2
Pest11 Code, Type, Scale:	TRFPR W
IN	
Height Minimum, Maximum:	6 8
Density, Unit:	1 PLA/m2

Application Equipment

	A
Appl. Equipment:	SPRAYER
Equipment Type:	BACKPA
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TTJET
Nozzle Size:	11002 UP
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.8 MPH
Spray Volume, Unit:	25 gal/ac
Propellant:	CO2

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .97764)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
2	MAT 28+	2.0	LB/GAL	SL	1.0	oz ai/a	POST	B	2.5 ml/mx	102	202	301
	2, 4-D AMINE+	3.80		SL	7.60	oz ai/a	POST	B	9.999 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
3	MAT 28+	2.0	LB/GAL	SL	2.0	oz ai/a	POST	B	4.999 ml/mx	103	205	304
	2, 4-D AMINE+	3.80		SL	15.20	oz ai/a	POST	B	20.0 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
4	RDQ98+	51		WG	0.08	lb ai/a	POST	B	1.504 g/mx	104	206	305
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
5	RDQ98+	51		WG	0.128	lb ai/a	POST	B	2.406 g/mx	105	203	302
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
6	CROSSBOW	3		L	4.5	lb ai/a	POST	B	120.0 ml/mx	106	204	306

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .97764)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
1	UNTREATED CONTROL									101	201	303

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
9.374	ml	MAT 28+	2.0	SL	
37.496	ml	2, 4-D AMINE+	3.80	SL	
24.997	ml	NIS	1.00	SL	
4.887	g	RDQ98+	51	WG	
149.984	ml	CROSSBOW	3	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Rep	Blk												
3	3	301	2	302	5	303	1	304	3	305	4	306	6
2	2	201	1	202	2	203	5	204	6	205	3	206	4
1	1	101	1	102	2	103	3	104	4	105	5	106	6

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type							W Weed	O Other	W Weed	O Other	W Weed	O Other	O Other	
Pest Code							ASTPI	POATR	RUBFR	DACGL	ACHDI	PHLPR	HOLLA	
Pest Scientific Name							Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	
Pest Name							WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil	Timothy	velvet grass	
Crop Code							YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	
Crop Scientific Name							Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	
Crop Name							Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	
Part Rated							WEED -	CROP -	WEED -	CROP -	WEED -	CROP -	CROP -	
Rating Date							6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	
Rating Type							CONTROL	INJURY	CONTROL	INJURY	CONTROL	INJURY	INJURY	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							30 30	30 30	30 30	30 30	30 30	30 30	30 30	
Trt-Eval Interval							30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7		
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0		
					201	0	0	0	0	0	0	0		
					303	0	0	0	0	0	0	0		
					Mean =	0	0	0	0	0	0	0		
2	MAT 28+	1.0	oz ai/a	B	102	99	0	20	0	60	0	0		
	2, 4-D AMINE+	7.60	oz ai/a	B	202	99	0	30	0	50	0	0		
	NIS	0.25	% v/v	B	301	99	0	40	0	50	0	0		
					Mean =	99	0	30	0	53	0	0		
3	MAT 28+	2.0	oz ai/a	B	103	99	0	35	0	40	0	0		
	2, 4-D AMINE+	15.20	oz ai/a	B	205	99	0	60	0	30	0	0		
	NIS	0.25	% v/v	B	304	99	0	35	0	30	0	0		
					Mean =	99	0	43	0	33	0	0		
4	RDQ98+	0.08	lb ai/a	B	104	99	0	50	50	70	40	0		
	NIS	0.25	% v/v	B	206	99	0	75	30	80	40	0		
					305	99	0	50	30	70	50	0		
					Mean =	99	0	58	37	73	43	0		
5	RDQ98+	0.128	lb ai/a	B	105	99	0	40	30	99	50	0		
	NIS	0.25	% v/v	B	203	99	0	70	25	50	50	0		
					302	99	0	60	40	40	30	0		
					Mean =	99	0	57	32	63	43	0		
6	CROSSBOW	4.5	lb ai/a	B	106	99	0	85	0	99	0	0		
					204	99	0	90	0	0	0	0		
					306	99	0	90	0	60	0	0		
					Mean =	99	0	88	0	53	0	0		

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	8	9	10	11	12	13	14
	Pest Type					W Weed	W Weed	O Other	W Weed	O Other	W Weed	O Other
	Pest Code					DAUCA	ASTPI	POATR	RUBFR	DACGL	ACHDI	PHLPR
	Pest Scientific Name					Daucus carota	Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>	Phleum pratense
	Pest Name					Wild carrot	WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil	Timothy
	Crop Code					YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF
	Crop Scientific Name					Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Crop Name					Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Part Rated					WEED -	WEED -	CROP -	WEED -	CROP -	WEED -	CROP -
	Rating Date					6/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011
	Rating Type					CONTROL	CONTROL	INJURY	CONTROL	INJURY	CONTROL	INJURY
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					30 30	60 60	60 60	60 60	60 60	60 60	60 60
	Trt-Eval Interval					30DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
	Number of Decimals					0	0	0	0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0
					201	0	0	0	0	0	0	0
					303	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0
2	MAT 28+	1.0	oz ai/a	B	102	99	95	0	15	0	99	0
	2, 4-D AMINE+	7.60	oz ai/a	B	202	99	99	0	20	0	99	0
	NIS	0.25	% v/v	B	301	99	99	0	20	0	99	0
					Mean =	99	98	0	18	0	99	0
3	MAT 28+	2.0	oz ai/a	B	103	99	99	0	30	0	99	0
	2, 4-D AMINE+	15.20	oz ai/a	B	205	99	99	0	20	0	99	0
	NIS	0.25	% v/v	B	304	99	99	0	30	0	99	0
					Mean =	99	99	0	27	0	99	0
4	RDQ98+	0.08	lb ai/a	B	104	99	99	0	50	0	99	20
	NIS	0.25	% v/v	B	206	99	99	0	60	0	99	30
					305	99	99	0	60	0	99	30
					Mean =	99	99	0	57	0	99	27
5	RDQ98+	0.128	lb ai/a	B	105	99	99	0	70	50	99	0
	NIS	0.25	% v/v	B	203	99	99	0	50	50	99	0
					302	99	99	0	85	50	99	0
					Mean =	99	99	0	68	50	99	0
6	CROSSBOW	4.5	lb ai/a	B	106	40	99	0	90	0	99	0
					204	30	99	0	99	0	99	0
					306	40	99	0	99	0	99	0
					Mean =	37	99	0	96	0	99	0

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	O Other HOLLA Holcus lanatus velvet grass	W Weed DAUCA Daucus carota Wild carrot	W Weed ASTPI Symphyotrichum> WH aster	O Other POATR Poa trivialis RS bluegrass	W Weed RUBFR Rubus fruticos> Eblackberry	O Other DACGL Dactylis glome> Orchard grass	W Weed ACHDI Achillea dista> T milfoil
	Pest Type					O Other	W Weed	W Weed	O Other	W Weed	O Other	W Weed
	Pest Code					HOLLA	DAUCA	ASTPI	POATR	RUBFR	DACGL	ACHDI
	Pest Scientific Name					Holcus lanatus	Daucus carota	Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>
	Pest Name					velvet grass	Wild carrot	WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil
	Crop Code					YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF
	Crop Scientific Name					Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Crop Name					Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Part Rated					CROP -	WEED -	WEED -	CROP -	WEED -	CROP -	WEED -
	Rating Date					7/30/2011	7/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011
	Rating Type					INJURY	CONTROL	CONTROL	INJURY	CONTROL	INJURY	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					60 60	60 60	91 91	91 91	91 91	91 91	91 91
	Trt-Eval Interval					60DAT	60DAT	90DAT	90DAT	90DAT	90DAT	90DAT
	Number of Decimals					0	0	0	0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0
					201	0	0	0	0	0	0	0
					303	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0
2	MAT 28+	1.0	oz ai/a	B	102	0	99	99	0	15	0	99
	2, 4-D AMINE+	7.60	oz ai/a	B	202	0	99	99	0	30	0	99
	NIS	0.25	% v/v	B	301	0	99	99	0	40	0	99
					Mean =	0	99	99	0	28	0	99
3	MAT 28+	2.0	oz ai/a	B	103	0	99	99	0	30	0	99
	2, 4-D AMINE+	15.20	oz ai/a	B	205	0	99	99	0	40	0	99
	NIS	0.25	% v/v	B	304	0	99	99	0	70	0	99
					Mean =	0	99	99	0	47	0	99
4	RDQ98+	0.08	lb ai/a	B	104	0	99	99	0	75	0	99
	NIS	0.25	% v/v	B	206	0	99	90	0	70	0	99
					305	0	99	99	0	30	0	99
					Mean =	0	99	96	0	58	0	99
5	RDQ98+	0.128	lb ai/a	B	105	0	99	99	0	95	0	99
	NIS	0.25	% v/v	B	203	0	99	99	0	70	0	99
					302	0	99	99	0	20	0	99
					Mean =	0	99	99	0	62	0	99
6	CROSSBOW	4.5	lb ai/a	B	106	0	80	99	0	75	0	99
					204	0	85	99	0	99	0	99
					306	0	75	99	0	99	0	99
					Mean =	0	80	99	0	91	0	99

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

| | | |

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
O, Other, G-BYRO7, G-OthStg = Other animal or nematode
Pest Code
ASTPI, Symphyotrichum pilosum, = US
RUBFR, Rubus fruticosus, = US
ACHDI, Achillea distans, = US
DAUCA, Daucus carota, = US
Crop Code
YNIGF, , Grassland not used in agric., = US
Rating Unit
% = percent

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8
	Pest Type				W Weed	O Other	W Weed	O Other	W Weed	O Other	O Other	W Weed
	Pest Code				ASTPI	POATR	RUBFR	DACGL	ACHDI	PHLPR	HOLLA	DAUCA
	Pest Scientific Name				Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota
	Pest Name				WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil	Timothy	velvet grass	Wild carrot
	Crop Code				YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF
	Crop Scientific Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Crop Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Part Rated				WEED -	CROP -	WEED -	CROP -	WEED -	CROP -	CROP -	WEED -
	Rating Date				6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011
	Rating Type				CONTROL	INJURY	CONTROL	INJURY	CONTROL	INJURY	INJURY	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				30 30	30 30	30 30	30 30	30 30	30 30	30 30	30 30
	Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 d	0 b	0 b	0 b	0 a	0 c
2	MAT 28+	1.0	oz ai/a	B	99 a	0 a	30 c	0 b	53 ab	0 b	0 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	2.0	oz ai/a	B	99 a	0 a	43 bc	0 b	33 ab	0 b	0 a	99 a
	2, 4-D AMINE+	15.20	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.08	lb ai/a	B	99 a	0 a	58 b	37 a	73 a	43 a	0 a	99 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.128	lb ai/a	B	99 a	0 a	57 b	32 a	63 a	43 a	0 a	99 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	4.5	lb ai/a	B	99 a	0 a	88 a	0 b	53 ab	0 b	0 a	37 b
	LSD (P=.05)				0.0	0.0	15.9	10.5	40.3	10.3	0.0	4.3
	Standard Deviation				0.0	0.0	8.7	5.7	22.2	5.7	0.0	2.4
	CV				0.0	0.0	18.95	50.48	48.21	39.3	0.0	3.27
	Bartlett's X2				0.0	0.0	3.975	0.319	13.466	0.857	0.0	0.0
	P(Bartlett's X2)				.	.	0.409	0.572	0.009*	0.355	.	.
	Replicate F				0.000	0.000	4.927	0.798	2.287	0.172	0.000	1.000
	Replicate Prob(F)				1.0000	1.0000	0.0324	0.4768	0.1521	0.8441	1.0000	0.4019
	Treatment F				0.000	0.000	34.851	28.479	4.166	46.621	0.000	1009.624
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	0.0263	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12	13	14	15	16
	Pest Type				W Weed	O Other	W Weed	O Other	W Weed	O Other	O Other	W Weed
	Pest Code				ASTPI	POATR	RUBFR	DACGL	ACHDI	PHLPR	HOLLA	DAUCA
	Pest Scientific Name				Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota
	Pest Name				WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil	Timothy	velvet grass	Wild carrot
	Crop Code				YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF
	Crop Scientific Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Crop Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Part Rated				WEED -	CROP -	WEED -	CROP -	WEED -	CROP -	CROP -	WEED -
	Rating Date				7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011	7/30/2011
	Rating Type				CONTROL	INJURY	CONTROL	INJURY	CONTROL	INJURY	INJURY	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 60
	Trt-Eval Interval				60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 d	0 b	0 b	0 b	0 a	0 c
2	MAT 28+	1.0	oz ai/a	B	98 a	0 a	18 c	0 b	99 a	0 b	0 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	2.0	oz ai/a	B	99 a	0 a	27 c	0 b	99 a	0 b	0 a	99 a
	2, 4-D AMINE+	15.20	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.08	lb ai/a	B	99 a	0 a	57 b	0 b	99 a	27 a	0 a	99 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.128	lb ai/a	B	99 a	0 a	68 b	50 a	99 a	0 b	0 a	99 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	4.5	lb ai/a	B	99 a	0 a	96 a	0 b	99 a	0 b	0 a	80 b
	LSD (P=.05)				1.7	0.0	14.3	0.0	0.0	4.3	0.0	3.7
	Standard Deviation				0.9	0.0	7.9	0.0	0.0	2.4	0.0	2.0
	CV				1.15	0.0	17.78	0.0	0.0	53.03	0.0	2.57
	Bartlett's X2				0.0	0.0	6.842	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)				.	.	0.144	.	.	.	.	.
	Replicate F				1.000	0.000	1.601	0.000	0.000	1.000	0.000	1.000
	Replicate Prob(F)				0.4019	1.0000	0.2494	1.0000	1.0000	0.4019	1.0000	0.4019
	Treatment F				5484.363	0.000	61.298	0.000	0.000	64.000	0.000	1129.152
	Treatment Prob(F)				0.0001	1.0000	0.0001	1.0000	1.0000	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011 Protocol ID: # US 567/11/10
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	17	18	19	20	21	22	23	24
	Pest Type				W Weed	O Other	W Weed	O Other	W Weed	O Other	O Other	W Weed
	Pest Code				ASTPI	POATR	RUBFR	DACGL	ACHDI	PHLPR	HOLLA	DAUCA
	Pest Scientific Name				Symphyotrichum>	Poa trivialis	Rubus fruticos>	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota
	Pest Name				WH aster	RS bluegrass	Eblackberry	Orchard grass	T milfoil	Timothy	velvet grass	Wild carrot
	Crop Code				YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF	YNIGF
	Crop Scientific Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Crop Name				Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >	Grassland not >
	Part Rated				WEED -	CROP -	WEED -	CROP -	WEED -	CROP -	CROP -	WEED -
	Rating Date				8/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011	8/30/2011
	Rating Type				CONTROL	INJURY	CONTROL	INJURY	CONTROL	INJURY	INJURY	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				91 91	91 91	91 91	91 91	91 91	91 91	91 91	91 91
	Trt-Eval Interval				90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 b	0 a	0 b	0 a	0 a	0 c
2	MAT 28+	1.0	oz ai/a	B	99 a	0 a	28 ab	0 a	99 a	0 a	0 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	2.0	oz ai/a	B	99 a	0 a	47 ab	0 a	99 a	0 a	0 a	99 a
	2, 4-D AMINE+	15.20	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.08	lb ai/a	B	96 a	0 a	58 ab	0 a	99 a	0 a	0 a	99 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.128	lb ai/a	B	99 a	0 a	62 ab	0 a	99 a	0 a	0 a	99 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	4.5	lb ai/a	B	99 a	0 a	91 a	0 a	99 a	0 a	0 a	72 b
	LSD (P=.05)				3.9	0.0	42.6	0.0	0.0	0.0	0.0	2.1
	Standard Deviation				2.1	0.0	23.4	0.0	0.0	0.0	0.0	1.2
	CV				2.59	0.0	49.15	0.0	0.0	0.0	0.0	1.51
	Bartlett's X2				0.0	0.0	2.893	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)				.	.	0.576	.	.	.	.	.
	Replicate F				1.000	0.000	0.193	0.000	0.000	0.000	0.000	1.000
	Replicate Prob(F)				0.4019	1.0000	0.8271	1.0000	1.0000	1.0000	1.0000	0.4019
	Treatment F				1076.800	0.000	5.285	0.000	0.000	0.000	0.000	3407.656
	Treatment Prob(F)				0.0001	1.0000	0.0124	1.0000	1.0000	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BLACKBERRY- WEED CONTROL WITH MAT28

Trial ID: BLACKBERRYWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 567/11/10
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
O, Other, G-BYRO7, G-OthStg = Other animal or nematode
Pest Code
ASTPI, Symphyotrichum pilosum, = US
RUBFR, Rubus fruticosus, = US
ACHDI, Achillea distans, = US
DAUCA, Daucus carota, = US
Crop Code
YNIGF, , Grassland not used in agric., = US
Rating Unit
% = percent

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	BROCCHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA
Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 1/1/2011
Planned Completion Date: 12/31/2011

COOPERATOR/LANDOWNER

Cooperator: Bruce Williams
Org: OARDC, Depatment HCS
Address 1: Fry Farm
City: Wooster
State/Prov: Ohio
Postal Code: 44691
Country: USA
Phone No: 330-263-3940

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: The objective of this trial is to evaluate the effect of 2,4-D, dicamba, and glyphosate simulated drift on processing broccolli.The trial was kept weed free. Damage ratings and growth measurements were taken at 3, 7, 14, 21, and 28 days after treatment. Yield data was taken at harvest.
Conclusions: At 3 and 7 days after treatment, only the 2,4-D 1x rate had significant injury. 14 days after treatment, the dicamba and 2,4-D at 1x each, both showed significant injury. By 21 days after treatment, the 1x 2,4-D treatment had almost 100% necrosis. Due to the plant death in this treatment, there was no harvest in these plots. Only the 1x 2,4-D resulted in significantly reduced yield. The lower rates and combination treatments all were significantly similar to the control plots.

Crop 1: BRSOK BROCOLLI **Variety:** AVENGER
Planting Date: 6/21/2010 **Planting Method:** MACHINE TRANSPLANTED
Rate: 1 PLANT/12" **Depth:** 2 IN
Row Spacing: 5 FT **Spacing Within Row:** 24 IN **Seed Bed:** CONVENTIONAL
Soil Moisture: MOIST

SITE AND DESIGN

Plot Width, Unit: 3 FT **Plot Length, Unit:** 15 FT **Reps:** 4
Site Type: LEVEL WELL DRAINED
Tillage Type: MOLDBOARD PLOW **Study Design:** RACOBL

SOIL DESCRIPTION

% Sand: 16 **% OM:** 3.11 **Texture:** SILT LOAM
% Silt: 72 **pH:** 6.7 **Soil Name:** WOOSTER SILT LOAM
% Clay: 12 **CEC:** 8.5 **Fert. Level:** MODERATE

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	BROCCHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

APPLICATION DESCRIPTION

	A
Application Date:	7/5/2011
Time of Day:	9-11 am
Application Method:	SPRAY
Application Timing:	POST3WATP
Applic. Placement:	BROADCAST
Air Temp., Unit:	75.5 F
% Relative Humidity:	63.1
Wind Velocity, Unit:	2.82 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	71.1 F

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	BRSOK POST
Stage Scale:	8 LEAF
Height, Unit:	5 IN

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 BKPK
Operating Pressure:	40
Nozzle Type:	FLAT FAN
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.3 MPH
Spray Volume, Unit:	15 GPA
Propellant:	CO2

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 3 by 15 feet
Spray vol: 15 gal/ac Mix size: 3 liters (min .26983)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	WEEDAR 64 (1 X)	3.8	SL	0.75	lb ae/a	POST	B	39.47 ml/mx	101	219	321	404
2	WEEDAR 64 (1/50 X)	3.8	SL	0.015	lb ae/a	POST	B	0.7894 ml/mx	102	220	310	406
3	WEEDAR 64 (1/100 X)	3.8	SL	0.0075	lb ae/a	POST	B	0.3947 ml/mx	103	217	304	401
4	WEEDAR 64 (1/150 X)	3.8	SL	0.005	lb ae/a	POST	B	0.2631 ml/mx	104	218	319	416
5	WEEDAR 64 (1/200 X)	3.8	SL	0.00374	lb ae/a	POST	B	0.1968 ml/mx	105	207	316	403
6	WEEDAR 64 (1/400 X)	3.8	SL	0.00187	lb ae/a	POST	B	.09841 ml/mx	106	208	320	410
7	CLARITY (1/50 X)	4	SL	0.01	lb ae/a	POST	B	0.4999 ml/mx	107	211	315	417
8	CLARITY (1/100 X)	4	SL	0.005	lb ae/a	POST	B	0.25 ml/mx	108	204	312	409
9	CLARITY (1/150 X)	4	SL	0.00333	lb ae/a	POST	B	0.1665 ml/mx	109	221	303	408
10	CLARITY (1/200 X)	4	SL	0.0025	lb ae/a	POST	B	0.125 ml/mx	110	213	301	402
11	CLARITY (1/400 X)	4	SL	0.00125	lb ae/a	POST	B	.06249 ml/mx	111	205	308	418
12	WEEDAR 64 (1/100 X)+	3.8	SL	0.0075	lb ae/a	POST	B	0.3947 ml/mx	112	201	307	413
	DURANGO (1/100 X)	4	SL	0.0075	lb ae/a	POST	B	0.375 ml/mx				
13	WEEDAR 64 (1/200 X)+	3.8	SL	0.00374	lb ae/a	POST	B	0.1968 ml/mx	113	216	306	407
	DURANGO (1/200 X)	4	SL	0.00374	lb ae/a	POST	B	0.187 ml/mx				
14	WEEDAR 64 (1/400 X)+	3.8	SL	0.00187	lb ae/a	POST	B	.09841 ml/mx	114	212	305	411
	DURANGO (1/400 X)	4	SL	0.00187	lb ae/a	POST	B	.09349 ml/mx				
16	Clarity (1x)	4	SL	0.5	lb ae/a	POST	B	25.0 ml/mx	116	215	318	415
17	Durango (1/100 x)	4	SL	0.0075	lb ae/a	POST	B	0.375 ml/mx	117	210	302	412
18	DURANGO (1/400 x)	4	SL	0.00187	lb ae/a	POST	B	.09349 ml/mx	118	214	309	421
19	Durango (1/100 x)	4	SL	0.0075	lb ae/a	POST	B	0.375 ml/mx	119	206	311	420
	Clarity (1/100 x)	4	SL	0.005	lb ae/a	POST	B	0.25 ml/mx				
20	Durango (1/200 x)	4	SL	0.00374	lb ae/a	POST	B	0.187 ml/mx	120	202	313	414
	Clarity (1/200 x)	4	SL	0.0025	lb ae/a	POST	B	0.125 ml/mx				
21	Clarity (1/400 x)	4	SL	0.00125	lb ae/a	POST	B	.06249 ml/mx	121	209	314	419
	Durango (1/400 x)	4	SL	0.00187	lb ae/a	POST	B	.09349 ml/mx				

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 3 by 15 feet
Spray vol: 15 gal/ac Mix size: 3 liters (min .26983)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
15	UNTREATED CONTROL								115	203	317	405

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
49.337	ml	WEEDAR 64 (1 X)	3.8	SL	
0.987	ml	WEEDAR 64 (1/50 X)	3.8	SL	
0.493	ml	WEEDAR 64 (1/100 X)	3.8	SL	
0.329	ml	WEEDAR 64 (1/150 X)	3.8	SL	
0.246	ml	WEEDAR 64 (1/200 X)	3.8	SL	
0.123	ml	WEEDAR 64 (1/400 X)	3.8	SL	
0.625	ml	CLARITY (1/50 X)	4	SL	
0.312	ml	CLARITY (1/100 X)	4	SL	
0.208	ml	CLARITY (1/150 X)	4	SL	
0.312	ml	CLARITY (1/200 X)	4	SL	
0.078	ml	CLARITY (1/400 X)	4	SL	
0.493	ml	WEEDAR 64 (1/100 X)+	3.8	SL	
1.406	ml	DURANGO (1/100 X)	4	SL	
0.246	ml	WEEDAR 64 (1/200 X)+	3.8	SL	
0.467	ml	DURANGO (1/200 X)	4	SL	
0.123	ml	WEEDAR 64 (1/400 X)+	3.8	SL	
0.351	ml	DURANGO (1/400 X)	4	SL	
31.247	ml	Clarity (1x)	4	SL	
0.312	ml	Clarity (1/100 x)	4	SL	
0.078	ml	Clarity (1/400 x)	4	SL	

* 'Per area' calculations based on spray volume= 15 gal/ac, mix size= 3 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	3	402	10	403	5	404	1	405	15	406	2	407	13	408	9	409	8	410	6
3	3	301	10	302	17	303	9	304	3	305	14	306	13	307	12	308	11	309	18	310	2
2	2	201	12	202	20	203	15	204	8	205	11	206	19	207	5	208	6	209	21	210	17
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk																		
4	4	411	14	412	17	413	12	414	20	415	16	416	4	417	7	418	11	419	21	420	19
3	3	311	19	312	8	313	20	314	21	315	7	316	5	317	15	318	16	319	4	320	6
2	2	211	7	212	14	213	10	214	18	215	16	216	13	217	3	218	4	219	1	220	2
1	1	111	11	112	12	113	13	114	14	115	15	116	16	117	17	118	18	119	19	120	20

Rep	Blk		
4	4	421	18
3	3	321	1
2	2	221	9
1	1	121	21

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM	CM
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
	# Subsamples, Dec.							- 0	- 0			- 0	- 0	- 0	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	30	40	0.0	0.0	40	60	20	13.0	13.0
					219	0.0	0.0	40	35	0.0	20.0	60	70	60	13.0	13.0
					321	0.0	0.0	70	40	5.0	10.0	80	60	20	9.0	10.0
					404	0.0	0.0	30	30	0.0	0.0	70	70	40	12.0	12.0
					Mean =	0.0	0.0	43	36	1.3	7.5	63	65	35	11.8	12.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	5	5	0.0	0.0	5	5	10	14.0	13.0
					220	0.0	0.0	0	0	0.0	0.0	10	10	15	13.0	14.0
					310	0.0	0.0	0	25	0.0	0.0	10	15	10	12.0	13.0
					406	0.0	0.0	0	0	0.0	0.0	0	5	10	14.0	14.0
					Mean =	0.0	0.0	1	8	0.0	0.0	6	9	11	13.3	13.5
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0	0	0.0	0.0	5	5	5	13.0	14.0
					217	0.0	0.0	0	0	0.0	0.0	5	5	5	15.0	14.0
					304	0.0	0.0	0	0	0.0	0.0	10	10	10	14.0	15.0
					401	0.0	0.0	0	0	0.0	0.0	5	15	20	15.0	13.0
					Mean =	0.0	0.0	0	0	0.0	0.0	6	9	10	14.3	14.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0	0	0.0	10.0	0	5	5	14.0	12.0
					218	0.0	0.0	0	0	0.0	0.0	5	5	5	15.0	15.0
					319	0.0	0.0	0	0	0.0	0.0	0	5	5	10.0	10.0
					416	0.0	0.0	0	0	0.0	0.0	0	5	5	14.0	15.0
					Mean =	0.0	0.0	0	0	0.0	2.5	1	5	5	13.3	13.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0	15	0.0	5.0	5	5	5	11.0	13.0
					207	0.0	0.0	0	0	0.0	0.0	5	10	10	14.0	13.0
					316	0.0	0.0	0	0	0.0	0.0	5	5	5	14.0	13.0
					403	0.0	0.0	0	5	0.0	0.0	0	10	15	13.0	14.0
					Mean =	0.0	0.0	0	5	0.0	1.3	4	8	9	13.0	13.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0	0	0.0	5.0	0	5	5	13.0	13.0
					208	0.0	0.0	0	0	0.0	5.0	5	10	5	13.0	12.0
					320	0.0	0.0	0	15	0.0	0.0	0	0	0	12.0	11.0
					410	0.0	0.0	0	0	0.0	0.0	5	5	5	12.0	13.0
					Mean =	0.0	0.0	0	4	0.0	2.5	3	5	4	12.5	12.3

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM	CM
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
	# Subsamples, Dec.							- 0	- 0			- 0	- 0	- 0	- 1	- 1
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	0	0	0.0	0.0	10	10	15	8.0	13.0
					211	0.0	0.0	0	0	0.0	0.0	0	10	15	14.0	14.0
					315	0.0	0.0	0	0	0.0	0.0	5	5	10	15.0	13.0
					417	0.0	0.0	0	0	0.0	0.0	10	10	15	13.0	14.0
					Mean =	0.0	0.0	0	0	0.0	0.0	6	9	14	12.5	13.5
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0	0	0.0	0.0	0	5	5	14.0	13.0
					204	0.0	0.0	0	10	0.0	0.0	5	10	10	12.0	13.0
					312	0.0	0.0	0	0	0.0	5.0	10	15	10	11.0	13.0
					409	0.0	0.0	0	5	0.0	0.0	5	15	10	13.0	10.0
					Mean =	0.0	0.0	0	4	0.0	1.3	5	11	9	12.5	12.3
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	5	0	0.0	0.0	0	5	5	13.0	10.0
					221	0.0	0.0	0	15	0.0	0.0	5	5	5	13.0	10.0
					303	0.0	0.0	0	0	0.0	0.0	5	10	15	13.0	12.0
					408	0.0	0.0	0	0	0.0	0.0	0	0	0	15.0	13.0
					Mean =	0.0	0.0	1	4	0.0	0.0	3	5	6	13.5	11.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0	0	0.0	0.0	0	5	5	14.0	13.0
					213	0.0	0.0	5	0	0.0	0.0	5	5	10	15.0	15.0
					301	0.0	0.0	0	0	0.0	5.0	10	15	15	14.0	15.0
					402	0.0	0.0	0	0	0.0	0.0	10	5	10	14.0	11.0
					Mean =	0.0	0.0	1	0	0.0	1.3	6	8	10	14.3	13.5
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0	10	0.0	5.0	0	5	5	16.0	15.0
					205	0.0	0.0	0	0	0.0	0.0	5	5	5	14.0	14.0
					308	0.0	0.0	0	0	0.0	5.0	5	0	5	16.0	14.0
					418	0.0	0.0	0	10	0.0	0.0	5	5	10	14.0	9.0
					Mean =	0.0	0.0	0	5	0.0	2.5	4	4	6	15.0	13.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	5	15	0.0	0.0	10	15	15	12.0	11.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	0	5	0.0	0.0	5	10	15	13.0	14.0
					307	0.0	0.0	5	0	0.0	5.0	10	10	10	14.0	14.0
					413	0.0	0.0	0	0	0.0	0.0	5	10	10	15.0	14.0
					Mean =	0.0	0.0	3	5	0.0	1.3	8	11	13	13.5	13.3

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM	CM
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
	# Subsamples, Dec.							- 0	- 0			- 0	- 0	- 0	- 1	- 1
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	5	0	0.0	5.0	10	15	10	12.0	11.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0	0	0.0	0.0	0	0	0	10.0	16.0
					306	0.0	0.0	0	0	0.0	5.0	5	10	10	13.0	14.0
					407	0.0	0.0	0	0	0.0	5.0	5	10	10	14.0	14.0
					Mean =	0.0	0.0	1	0	0.0	3.8	5	9	8	12.3	13.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0	0	0.0	5.0	5	10	5	13.0	11.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0	0	0.0	5.0	0	5	5	13.0	16.0
					305	0.0	0.0	5	0	0.0	0.0	5	5	5	12.0	13.0
					411	0.0	0.0	0	0	0.0	0.0	5	5	5	13.0	13.0
					Mean =	0.0	0.0	1	0	0.0	2.5	4	6	5	12.8	13.3
15	UNTREATED CONTROL				115	0.0	0.0	0	0	0.0	0.0	0	0	0	13.0	12.0
					203	0.0	0.0	0	0	0.0	0.0	0	0	0	15.0	14.0
					317	0.0	0.0	0	0	0.0	0.0	0	0	0	17.0	13.0
					405	0.0	0.0	0	0	0.0	0.0	0	0	0	13.0	13.0
					Mean =	0.0	0.0	0	0	0.0	0.0	0	0	0	14.5	13.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	5	0	0.0	5.0	5	15	15	13.0	13.0
					215	0.0	0.0	50	50	0.0	0.0	60	45	35	13.0	13.0
					318	0.0	0.0	50	50	0.0	0.0	0	5	10	14.0	15.0
					415	0.0	0.0	35	35	0.0	0.0	60	60	60	14.0	12.0
					Mean =	0.0	0.0	35	34	0.0	1.3	31	31	30	13.5	13.3
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	5	0	0.0	5.0	0	10	10	13.0	14.0
					210	0.0	0.0	0	10	0.0	5.0	5	0	10	12.0	14.0
					302	0.0	0.0	0	0	0.0	0.0	5	5	5	15.0	13.0
					412	0.0	0.0	0	0	0.0	0.0	5	5	5	14.0	12.0
					Mean =	0.0	0.0	1	3	0.0	2.5	4	5	8	13.5	13.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0	0	0.0	0.0	10	10	10	14.0	13.0
					214	0.0	0.0	0	0	0.0	0.0	0	5	5	13.0	13.0
					309	0.0	0.0	0	0	0.0	0.0	60	85	40	12.0	13.0
					421	0.0	0.0	0	0	0.0	0.0	0	0	0	14.0	14.0
					Mean =	0.0	0.0	0	0	0.0	0.0	18	25	14	13.3	13.3

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM	CM
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
	# Subsamples, Dec.							- 0	- 0			- 0	- 0	- 0	- 1	- 1
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	0.0	0.0	5	0	0.0	0.0	0	5	5	15.0	14.0
	Clarity (1/100 x)	0.005	lb ae/a	B	206	0.0	0.0	0	0	0.0	5.0	5	10	10	15.0	16.0
					311	0.0	0.0	0	10	0.0	0.0	10	10	10	8.0	12.0
					420	0.0	0.0	0	0	0.0	0.0	5	5	0	14.0	14.0
					Mean =	0.0	0.0	1	3	0.0	1.3	5	8	6	13.0	14.0
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	0.0	0.0	0	10	0.0	10.0	5	10	5	13.0	12.0
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	0.0	0.0	0	0	0.0	0.0	5	5	5	12.0	13.0
					313	0.0	0.0	0	0	0.0	0.0	5	10	10	12.0	12.0
					414	0.0	0.0	0	0	0.0	0.0	15	20	20	14.0	14.0
					Mean =	0.0	0.0	0	3	0.0	2.5	8	11	10	12.8	12.8
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	0	0	0.0	0.0	5	5	10	17.0	14.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0	0	0.0	0.0	5	5	5	15.0	16.0
					314	0.0	0.0	0	5	0.0	0.0	0	0	0	13.0	14.0
					419	0.0	0.0	0	5	0.0	0.0	5	5	5	10.0	11.0
					Mean =	0.0	0.0	0	3	0.0	0.0	4	4	5	13.8	13.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -	PLANT3 -
Rating Data Type					HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT	HEIGHT
Rating Unit					CM	CM	CM	%	%	%	%	%	CM	CM	CM
Rating Date					7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
Trt-Eval Interval					7DAT	7DAT	7 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT
# Subsamples, Dec.					- 1	- 1	- 1	- 0	- 0	- 0	- 0		- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21	22
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	14.0	11.0	14.0	30	70	90	75	20.0	10.0	13.0	13.0
					219	12.0	12.0	13.0	100	50	100	100	0.0	12.0	13.0	11.0
					321	8.0	10.0	13.0	100	30	100	100	0.0	9.0	9.0	11.0
					404	11.0	12.0	12.0	100	60	100	100	0.0	13.0	14.0	12.0
					Mean =	11.3	11.3	13.0	83	53	98	94	5.0	11.0	12.3	11.8
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	12.0	12.0	13.0	0	0	10	10	10.0	16.0	15.0	13.0
					220	13.0	11.0	11.0	0	0	0	15	0.0	16.0	19.0	17.0
					310	12.0	10.0	9.0	0	0	0	30	0.0	16.0	18.0	14.0
					406	12.0	13.0	12.0	0	0	0	25	10.0	19.0	19.0	18.0
					Mean =	12.3	11.5	11.3	0	0	3	20	5.0	16.8	17.8	15.5
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	14.0	13.0	14.0	0	0	5	10	15.0	18.0	17.0	18.0
					217	15.0	12.0	15.0	0	0	0	0	0.0	18.0	19.0	17.0
					304	14.0	16.0	15.0	0	0	0	0	0.0	13.0	17.0	19.0
					401	13.0	12.0	15.0	0	0	0	20	0.0	18.0	16.0	17.0
					Mean =	14.0	13.3	14.8	0	0	1	8	3.8	16.8	17.3	17.8
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	13.0	13.0	13.0	0	5	5	5	5.0	16.0	15.0	18.0
					218	15.0	12.0	13.0	0	0	0	0	0.0	17.0	17.0	19.0
					319	10.0	13.0	14.0	0	0	0	30	10.0	13.0	15.0	13.0
					416	15.0	14.0	15.0	0	0	0	0	0.0	17.0	19.0	19.0
					Mean =	13.3	13.0	13.8	0	1	1	9	3.8	15.8	16.5	17.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	12.0	14.0	10.0	0	0	5	10	5.0	14.0	12.0	14.0
					207	11.0	14.0	13.0	0	0	5	5	5.0	19.0	18.0	16.0
					316	13.0	15.0	12.0	0	0	5	10	5.0	16.0	16.0	16.0
					403	11.0	10.0	12.0	0	0	0	20	10.0	17.0	17.0	16.0
					Mean =	11.8	13.3	11.8	0	0	4	11	6.3	16.5	15.8	15.5
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	13.0	12.0	15.0	0	0	0	5	5.0	15.0	15.0	15.0
					208	12.0	13.0	15.0	0	0	0	20	0.0	16.0	16.0	15.0
					320	11.0	13.0	9.0	0	0	0	15	0.0	16.0	15.0	15.0
					410	14.0	11.0	13.0	0	0	0	0	0.0	16.0	18.0	18.0
					Mean =	12.5	12.3	13.0	0	0	0	10	1.3	15.8	16.0	15.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -	PLANT3 -
Rating Data Type					HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT	HEIGHT
Rating Unit					CM	CM	CM	%	%	%	%	%	CM	CM	CM
Rating Date					7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
Trt-Eval Interval					7DAT	7DAT	7 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT
# Subsamples, Dec.					- 1	- 1	- 1	- 0	- 0	- 0	- 0		- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21	22
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	14.0	13.0	13.0	0	5	0	5	5.0	12.0	15.0	16.0
					211	14.0	13.0	14.0	0	0	0	10	0.0	18.0	19.0	17.0
					315	18.0	13.0	15.0	0	0	0	0	0.0	17.0	18.0	20.0
					417	15.0	15.0	10.0	0	0	0	10	10.0	18.0	16.0	17.0
					Mean =	15.3	13.5	13.0	0	1	0	6	3.8	16.3	17.0	17.5
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	12.0	12.0	15.0	0	5	0	10	10.0	16.0	16.0	17.0
					204	13.0	12.0	12.0	0	0	0	15	5.0	16.0	17.0	17.0
					312	14.0	11.0	13.0	0	0	0	15	15.0	15.0	19.0	16.0
					409	10.0	12.0	9.0	0	0	0	40	10.0	16.0	12.0	13.0
					Mean =	12.3	11.8	12.3	0	1	0	20	10.0	15.8	16.0	15.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	14.0	12.0	13.0	0	5	0	10	10.0	16.0	14.0	14.0
					221	10.0	13.0	10.0	0	0	0	30	5.0	16.0	14.0	15.0
					303	13.0	15.0	15.0	0	0	0	20	0.0	19.0	16.0	18.0
					408	12.0	13.0	16.0	0	0	0	0	0.0	18.0	20.0	20.0
					Mean =	12.3	13.3	13.5	0	1	0	15	3.8	17.3	16.0	16.8
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	13.0	13.0	14.0	0	0	0	5	5.0	18.0	16.0	17.0
					213	13.0	12.0	12.0	0	0	0	0	0.0	18.0	20.0	18.0
					301	13.0	13.0	16.0	0	0	15	0	0.0	19.0	17.0	16.0
					402	15.0	14.0	12.0	0	0	0	0	0.0	18.0	16.0	19.0
					Mean =	13.5	13.0	13.5	0	0	4	1	1.3	18.3	17.3	17.5
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	11.0	12.0	11.0	0	0	0	0	0.0	20.0	16.0	13.0
					205	13.0	14.0	13.0	0	0	0	15	0.0	16.0	18.0	15.0
					308	17.0	14.0	15.0	0	0	10	0	0.0	18.0	17.0	19.0
					418	12.0	12.0	10.0	0	0	0	10	0.0	19.0	14.0	18.0
					Mean =	13.3	13.0	12.3	0	0	3	6	0.0	18.3	16.3	16.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	12.0	15.0	15.0	0	0	0	0	0.0	15.0	14.0	16.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	11.0	12.0	14.0	0	0	0	15	5.0	16.0	17.0	15.0
					307	15.0	15.0	15.0	0	0	0	0	0.0	16.0	17.0	18.0
					413	13.0	14.0	15.0	0	0	0	0	0.0	18.0	18.0	18.0
					Mean =	12.8	14.0	14.8	0	0	0	4	1.3	16.3	16.5	16.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT3 - HEIGHT CM 7/12/2011 7DAT - 1 (12)	BRSOK PLANT4 - HEIGHT CM 7/12/2011 7DAT - 1 (13)	BRSOK PLANT5 - HEIGHT CM 7/12/2011 7 DAT - 1 (14)	BRSOK PLANT - NECROSIS % 7/19/2011 14 DAT - 0 (15)	BRSOK PLANT - CHLOROSIS % 7/19/2011 14 DAT - 0 (16)	BRSOK PLANT - EPINASTY % 7/19/2011 14 DAT - 0 (17)	BRSOK PLANT - INJURY % 7/19/2011 14 DAT - 0 (18)	BRSOK LEAF - CURL % 7/19/2011 14 DAT (19)	BRSOK PLANT1 - HEIGHT CM 7/19/2011 14DAT - 1 (20)	BRSOK PLANT2 - HEIGHT CM 7/19/2011 14DAT - 1 (21)	BRSOK PLANT3 - HEIGHT CM 7/19/2011 14DAT - 1 (22)
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	13.0	15.0	15.0	0	0	0	0	0.0	17.0	17.0	17.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	15.0	15.0	14.0	0	0	0	0	0.0	19.0	21.0	18.0
					306	14.0	14.0	14.0	0	0	0	0	0.0	18.0	16.0	16.0
					407	13.0	15.0	13.0	0	0	0	10	0.0	18.0	18.0	17.0
					Mean =	13.8	14.8	14.0	0	0	0	3	0.0	18.0	18.0	17.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	13.0	13.0	11.0	0	0	0	15	0.0	16.0	18.0	18.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	15.0	15.0	14.0	0	0	0	0	0.0	17.0	18.0	20.0
					305	14.0	14.0	14.0	0	0	5	0	0.0	18.0	17.0	19.0
					411	14.0	15.0	13.0	0	0	0	0	0.0	19.0	18.0	16.0
					Mean =	14.0	14.3	13.0	0	0	1	4	0.0	17.5	17.8	18.3
15	UNTREATED CONTROL				115	13.0	10.0	10.0	0	0	0	0	0.0	18.0	18.0	16.0
					203	13.0	14.0	17.0	0	0	0	0	0.0	17.0	18.0	20.0
					317	14.0	14.0	14.0	0	0	5	15	15.0	19.0	18.0	19.0
					405	12.0	12.0	12.0	0	0	0	0	0.0	18.0	16.0	17.0
					Mean =	13.0	12.5	13.3	0	0	1	4	3.8	18.0	17.5	18.0
16	Clarity (1x)	0.5	lb ae/a	B	116	12.0	11.0	14.0	0	0	0	0	0.0	16.0	16.0	17.0
					215	14.0	14.0	12.0	0	0	75	50	0.0	16.0	17.0	18.0
					318	12.0	13.0	12.0	0	0	75	50	0.0	14.0	17.0	13.0
					415	13.0	13.0	13.0	0	10	75	85	0.0	19.0	17.0	18.0
					Mean =	12.8	12.8	12.8	0	3	56	46	0.0	16.3	16.8	16.5
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	13.0	14.0	13.0	0	0	0	0	0.0	17.0	18.0	18.0
					210	14.0	14.0	10.0	0	0	0	10	0.0	18.0	18.0	18.0
					302	13.0	15.0	14.0	0	0	0	15	0.0	17.0	18.0	16.0
					412	16.0	12.0	14.0	0	0	0	0	0.0	18.0	15.0	17.0
					Mean =	14.0	13.8	12.8	0	0	0	6	0.0	17.5	17.3	17.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	13.0	14.0	14.0	0	0	0	0	0.0	16.0	19.0	17.0
					214	14.0	14.0	15.0	0	0	0	10	0.0	17.0	15.0	17.0
					309	13.0	15.0	14.0	0	0	0	10	5.0	18.0	18.0	16.0
					421	14.0	13.0	14.0	0	0	0	0	0.0	17.0	18.0	18.0
					Mean =	13.5	14.0	14.3	0	0	0	5	1.3	17.0	17.5	17.0

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21	22
	Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated					PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -	PLANT3 -
	Rating Data Type					HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT	HEIGHT
	Rating Unit					CM	CM	CM	%	%	%	%	%	CM	CM	CM
	Rating Date					7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
	Trt-Eval Interval					7DAT	7DAT	7 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT
	# Subsamples, Dec.					- 1	- 1	- 1	- 0	- 0	- 0	- 0		- 1	- 1	- 1
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	13.0	13.0	15.0	0	0	0	0	0.0	18.0	19.0	18.0
	Clarity (1/100 x)	0.005	lb ae/a	B	206	15.0	15.0	14.0	0	0	0	0	0.0	18.0	20.0	18.0
					311	13.0	14.0	9.0	0	0	0	10	10.0	11.0	15.0	17.0
					420	13.0	13.0	12.0	0	0	0	0	0.0	18.0	16.0	17.0
					Mean =	13.5	13.8	12.5	0	0	0	3	2.5	16.3	17.5	17.5
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	13.0	12.0	14.0	0	0	0	0	0.0	14.0	17.0	16.0
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	13.0	13.0	14.0	0	0	0	0	0.0	16.0	18.0	18.0
					313	12.0	13.0	12.0	0	0	0	15	10.0	16.0	15.0	16.0
					414	13.0	14.0	15.0	0	0	10	0	20.0	17.0	18.0	18.0
					Mean =	12.8	13.0	13.8	0	0	3	4	7.5	15.8	17.0	17.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	12.0	13.0	14.0	0	0	0	0	0.0	18.0	17.0	16.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	13.0	12.0	12.0	0	0	0	0	0.0	18.0	18.0	18.0
					314	13.0	13.0	14.0	0	0	0	0	0.0	16.0	19.0	16.0
					419	12.0	12.0	9.0	0	0	0	10	10.0	15.0	14.0	15.0
					Mean =	12.5	12.5	12.3	0	0	0	3	2.5	16.8	17.0	16.3

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1 (23)	BRSOK PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1 (24)	BRSOK PLANT - NECROSIS % 7/26/2011 21 DAT - 0 (25)	BRSOK PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0 (26)	BRSOK PLANT - EPINASTY % 7/26/2011 21 DAT - 0 (27)	BRSOK PLANT - INJURY % 7/26/2011 21 DAT - 0 (28)	LEAF - CURL % 7/26/2011 21 DAT (29)	PLANT - STUNT % 7/26/2011 21DAT (30)	BRSOK PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1 (31)	BRSOK PLANT2 - HEIGHT CM 8/2/2011 28DAT - 1 (32)	BRSOK PLANT3 - HEIGHT CM 8/2/2011 28DAT - 1 (33)
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	11.0	13.0	100	100	100	100	5.0	100.0	0.0	0.0	0.0
					219	12.0	11.0	100	100	10	100	100.0	100.0	0.0	0.0	0.0
					321	10.0	15.0	100	100	100	100	100.0	100.0	0.0	0.0	0.0
					404	14.0	14.0	95	95	95	95	95.0	95.0	0.0	0.0	0.0
					Mean =	11.8	13.3	99	99	76	99	75.0	98.8	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	14.0	16.0	0	10	0	40	20.0	25.0	23.0	24.0	22.0
					220	16.0	13.0	0	5	0	10	10.0	5.0	24.0	23.0	25.0
					310	14.0	14.0	0	5	0	5	5.0	5.0	20.0	23.0	23.0
					406	18.0	17.0	0	0	0	20	0.0	5.0	23.0	26.0	22.0
					Mean =	15.5	15.0	0	5	0	19	8.8	10.0	22.5	24.0	23.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	17.0	17.0	0	0	0	10	10.0	5.0	24.0	25.0	27.0
					217	16.0	16.0	0	5	0	5	5.0	5.0	26.0	21.0	22.0
					304	19.0	19.0	0	0	0	5	5.0	0.0	24.0	24.0	23.0
					401	17.0	18.0	0	5	0	5	0.0	0.0	23.0	22.0	22.0
					Mean =	17.3	17.5	0	3	0	6	5.0	2.5	24.3	23.0	23.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	18.0	17.0	0	0	0	10	5.0	5.0	22.0	23.0	20.0
					218	17.0	18.0	0	5	0	10	10.0	0.0	19.0	24.0	27.0
					319	16.0	17.0	0	0	0	5	5.0	5.0	20.0	21.0	21.0
					416	18.0	18.0	0	0	0	0	0.0	0.0	21.0	20.0	23.0
					Mean =	17.3	17.5	0	1	0	6	5.0	2.5	20.5	22.0	22.8
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	18.0	15.0	0	0	0	5	5.0	0.0	19.0	25.0	21.0
					207	20.0	17.0	0	0	0	0	0.0	0.0	21.0	23.0	21.0
					316	18.0	18.0	0	5	0	10	5.0	0.0	19.0	21.0	18.0
					403	13.0	18.0	0	0	0	0	0.0	0.0	25.0	23.0	23.0
					Mean =	17.3	17.0	0	1	0	4	2.5	0.0	21.0	23.0	20.8
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	15.0	18.0	0	0	0	0	0.0	0.0	20.0	23.0	22.0
					208	16.0	17.0	0	0	0	10	0.0	5.0	27.0	26.0	24.0
					320	17.0	13.0	0	0	0	0	0.0	0.0	20.0	22.0	20.0
					410	17.0	17.0	0	0	0	0	0.0	0.0	20.0	21.0	24.0
					Mean =	16.3	16.3	0	0	0	3	0.0	1.3	21.8	23.0	22.5

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code																
Part Rated																
Rating Data Type																
Rating Unit						BRSOK PLANT4 - HEIGHT CM	BRSOK PLANT5 - HEIGHT CM	BRSOK PLANT - NECROSIS %	BRSOK PLANT - CHLOROSIS %	BRSOK PLANT - EPINASTY %	BRSOK PLANT - INJURY %	LEAF - CURL %	PLANT - STUNT %	BRSOK PLANT1 - HEIGHT CM	BRSOK PLANT2 - HEIGHT CM	BRSOK PLANT3 - HEIGHT CM
Rating Date						7/19/2011	7/19/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	8/2/2011	8/2/2011	8/2/2011
Trt-Eval Interval						14DAT	14DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21DAT	28DAT	28DAT	28DAT
# Subsamples, Dec.						- 1	- 1	- 0	- 0	- 0	- 0			- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	23	24	25	26	27	28	29	30	31	32	33
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	12.0	15.0	0	0	0	5	0.0	0.0	18.0	19.0	23.0
					211	19.0	18.0	0	10	0	15	5.0	5.0	20.0	22.0	20.0
					315	18.0	20.0	0	0	0	5	0.0	5.0	25.0	30.0	26.0
					417	17.0	20.0	0	10	0	15	0.0	5.0	22.0	23.0	27.0
					Mean =	16.5	18.3	0	5	0	10	1.3	3.8	21.3	23.5	24.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	14.0	18.0	0	0	0	10	0.0	0.0	27.0	26.0	27.0
					204	15.0	17.0	0	0	0	0	0.0	0.0	20.0	24.0	24.0
					312	14.0	17.0	0	5	0	5	5.0	0.0	19.0	24.0	25.0
					409	14.0	13.0	0	10	0	40	20.0	25.0	14.0	15.0	16.0
					Mean =	14.3	16.3	0	4	0	14	6.3	6.3	20.0	22.3	23.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	16.0	18.0	0	0	0	0	0.0	0.0	20.0	24.0	21.0
					221	15.0	14.0	0	10	0	10	5.0	0.0	20.0	21.0	15.0
					303	19.0	17.0	0	5	0	5	5.0	0.0	21.0	22.0	23.0
					408	18.0	12.0	0	10	0	5	5.0	0.0	24.0	25.0	26.0
					Mean =	17.0	15.3	0	6	0	5	3.8	0.0	21.3	23.0	21.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	16.0	18.0	0	0	0	15	0.0	5.0	24.0	24.0	25.0
					213	19.0	16.0	0	5	0	5	0.0	0.0	23.0	23.0	20.0
					301	16.0	18.0	0	5	0	0	0.0	0.0	22.0	26.0	20.0
					402	18.0	16.0	0	5	0	5	5.0	0.0	24.0	24.0	27.0
					Mean =	17.3	17.0	0	4	0	6	1.3	1.3	23.3	24.3	23.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	16.0	15.0	0	0	0	0	0.0	0.0	23.0	23.0	17.0
					205	17.0	16.0	0	0	0	10	0.0	5.0	21.0	28.0	22.0
					308	18.0	18.0	0	0	0	0	0.0	0.0	26.0	25.0	27.0
					418	13.0	14.0	0	0	0	0	0.0	0.0	23.0	24.0	24.0
					Mean =	16.0	15.8	0	0	0	3	0.0	1.3	23.3	25.0	22.5
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	17.0	17.0	0	0	0	5	5.0	5.0	20.0	19.0	21.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	16.0	16.0	0	0	0	10	10.0	5.0	19.0	18.0	20.0
					307	20.0	20.0	0	0	0	5	0.0	0.0	24.0	25.0	30.0
					413	18.0	18.0	0	0	0	5	0.0	5.0	21.0	30.0	25.0
					Mean =	17.8	17.8	0	0	0	6	3.8	3.8	21.0	23.0	24.0

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1	BRSOK PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1	BRSOK PLANT - NECROSIS % 7/26/2011 21 DAT - 0	BRSOK PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0	BRSOK PLANT - EPINASTY % 7/26/2011 21 DAT - 0	BRSOK PLANT - INJURY % 7/26/2011 21 DAT - 0	LEAF - CURL % 7/26/2011 21 DAT	PLANT - STUNT % 7/26/2011 21DAT	BRSOK PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT2 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT3 - HEIGHT CM 8/2/2011 28DAT - 1
						23	24	25	26	27	28	29	30	31	32	33
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	19.0	18.0	0	0	0	5	5.0	5.0	21.0	25.0	24.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	19.0	18.0	0	0	0	5	0.0	0.0	23.0	27.0	26.0
					306	18.0	17.0	0	0	0	5	0.0	5.0	16.0	25.0	22.0
					407	19.0	18.0	0	5	0	15	10.0	0.0	26.0	26.0	21.0
					Mean =	18.8	17.8	0	1	0	8	3.8	2.5	21.5	25.8	23.3
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	18.0	15.0	0	0	0	0	0.0	0.0	18.0	23.0	23.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	18.0	18.0	0	0	0	0	0.0	0.0	25.0	27.0	27.0
					305	20.0	19.0	0	0	0	0	0.0	0.0	26.0	27.0	24.0
					411	18.0	18.0	0	0	0	0	0.0	0.0	23.0	25.0	23.0
					Mean =	18.5	17.5	0	0	0	0	0.0	0.0	23.0	25.5	24.3
15	UNTREATED CONTROL				115	13.0	14.0	0	0	0	0	0.0	0.0	23.0	23.0	22.0
					203	17.0	20.0	0	0	0	0	0.0	0.0	24.0	22.0	26.0
					317	16.0	16.0	0	0	0	0	0.0	0.0	27.0	28.0	28.0
					405	16.0	18.0	0	0	0	0	0.0	0.0	23.0	24.0	23.0
					Mean =	15.5	17.0	0	0	0	0	0.0	0.0	24.3	24.3	24.8
16	Clarity (1x)	0.5	lb ae/a	B	116	16.0	17.0	0	40	0	5	0.0	10.0	21.0	21.0	20.0
					215	19.0	18.0	0	25	0	25	10.0	15.0	22.0	26.0	24.0
					318	20.0	17.0	0	30	0	45	35.0	20.0	24.0	26.0	25.0
					415	12.0	17.0	0	30	0	40	50.0	15.0	23.0	22.0	20.0
					Mean =	16.8	17.3	0	31	0	29	23.8	15.0	22.5	23.8	22.3
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	18.0	16.0	0	0	0	0	0.0	0.0	23.0	24.0	24.0
					210	18.0	17.0	0	5	0	0	10.0	0.0	22.0	26.0	25.0
					302	19.0	18.0	0	0	0	5	5.0	5.0	24.0	25.0	27.0
					412	17.0	17.0	0	0	0	5	5.0	5.0	23.0	23.0	20.0
					Mean =	18.0	17.0	0	1	0	3	5.0	2.5	23.0	24.5	24.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	18.0	17.0	0	0	0	15	0.0	10.0	20.0	24.0	14.0
					214	18.0	18.0	0	0	0	0	0.0	0.0	20.0	23.0	23.0
					309	18.0	16.0	0	0	0	0	0.0	0.0	24.0	23.0	23.0
					421	17.0	17.0	0	0	0	0	0.0	0.0	23.0	25.0	23.0
					Mean =	17.8	17.0	0	0	0	4	0.0	2.5	21.8	23.8	20.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1	BRSOK PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1	BRSOK PLANT - NECROSIS % 7/26/2011 21 DAT - 0	BRSOK PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0	BRSOK PLANT - EPINASTY % 7/26/2011 21 DAT - 0	BRSOK PLANT - INJURY % 7/26/2011 21 DAT - 0	LEAF - CURL % 7/26/2011 21 DAT	PLANT - STUNT % 7/26/2011 21DAT	BRSOK PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT2 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT3 - HEIGHT CM 8/2/2011 28DAT - 1
						23	24	25	26	27	28	29	30	31	32	33
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	18.0	19.0	0	0	0	5	5.0	0.0	23.0	25.0	27.0
	Clarity (1/100 x)	0.005	lb ae/a	B	206	16.0	17.0	0	0	0	0	0.0	0.0	21.0	26.0	25.0
					311	18.0	16.0	0	5	0	5	0.0	5.0	15.0	21.0	25.0
					420	17.0	17.0	0	5	0	5	0.0	0.0	23.0	23.0	25.0
					Mean =	17.3	17.3	0	3	0	4	1.3	1.3	20.5	23.8	25.5
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	17.0	18.0	0	0	0	15	0.0	10.0	20.0	24.0	24.0
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	17.0	24.0	0	5	0	5	0.0	0.0	20.0	24.0	21.0
					313	16.0	15.0	0	5	0	5	10.0	0.0	18.0	24.0	27.0
					414	18.0	15.0	0	5	0	0	0.0	5.0	22.0	25.0	26.0
					Mean =	17.0	18.0	0	4	0	6	2.5	3.8	20.0	24.3	24.5
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	16.0	15.0	0	0	0	0	0.0	0.0	21.0	22.0	23.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	18.0	15.0	0	0	0	5	0.0	0.0	23.0	24.0	26.0
					314	18.0	17.0	0	0	0	0	0.0	0.0	20.0	26.0	23.0
					419	16.0	14.0	0	0	0	0	0.0	0.0	18.0	21.0	19.0
					Mean =	17.0	15.3	0	0	0	1	0.0	0.0	20.5	23.3	22.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT4 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -
Rating Data Type					HEIGHT	HEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH
Rating Unit					CM	CM	CM	CM	GRAMS	CM	CM	GRAMS	CM
Rating Date					8/2/2011	8/2/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
Trt-Eval Interval					28DAT	28DAT	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	34	35	36	37	39	40	41	43	44
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	22.0	20.0	27.0	29.0	1522.0	28.0	25.0	1333.0	19.0
					220	25.0	21.0	34.0	33.0	2008.0	23.0	16.0	1339.0	27.0
					310	20.0	23.0	30.0	38.0	2610.0	31.0	36.0	1334.0	26.0
					406	23.0	22.0	31.0	28.0	1937.0	15.0	13.0	362.0	23.0
					Mean =	22.5	21.5	30.5	32.0	2019.3	24.3	22.5	1092.0	23.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	25.0	26.0	35.0	28.0	2109.0	28.0	28.0	1590.0	30.0
					217	23.0	12.0	38.0	42.0	2505.0	24.0	33.0	1420.0	26.0
					304	22.0	25.0	37.0	42.0	2516.0	24.0	27.0	999.0	35.0
					401	21.0	25.0	34.0	28.0	2736.0	14.0	20.0	634.0	32.0
					Mean =	22.8	22.0	36.0	35.0	2466.5	22.5	27.0	1160.8	30.8
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	24.0	21.0	27.0	15.0	844.0	13.0	17.0	547.0	27.0
					218	26.0	25.0	38.0	30.0	2344.0	17.0	15.0	406.0	31.0
					319	23.0	24.0	17.0	21.0	1146.0	28.0	26.0	1728.0	16.0
					416	21.0	22.0	34.0	29.0	1821.0	28.0	24.0	1394.0	26.0
					Mean =	23.5	23.0	29.0	23.8	1538.8	21.5	20.5	1018.8	25.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	25.0	20.0	30.0	28.0	1411.0	27.0	28.0	1958.0	5.0
					207	24.0	22.0	33.0	29.0	2128.0	18.0	27.0	935.0	28.0
					316	29.0	24.0	38.0	40.0	2847.0	34.0	38.0	2726.0	28.0
					403	24.0	24.0	37.0	34.0	2032.0	34.0	31.0	1738.0	24.0
					Mean =	25.5	22.5	34.5	32.8	2104.5	28.3	31.0	1839.3	21.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	25.0	26.0	28.0	26.0	1514.0	26.0	27.0	1206.0	27.0
					208	28.0	28.0	48.0	40.0	3272.0	29.0	28.0	1444.0	13.0
					320	19.0	19.0	29.0	37.0	2286.0	17.0	23.0	661.0	25.0
					410	23.0	26.0	35.0	27.0	2133.0	28.0	22.0	1509.0	13.0
					Mean =	23.8	24.8	35.0	32.5	2301.3	25.0	25.0	1205.0	19.5

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT4 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -
Rating Data Type					HEIGHT	HEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH
Rating Unit					CM	CM	CM	CM	GRAMS	CM	CM	GRAMS	CM
Rating Date					8/2/2011	8/2/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
Trt-Eval Interval					28DAT	28DAT	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	34	35	36	37	39	40	41	43	44
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	21.0	18.0	23.0	17.0	564.0	24.0	20.0	973.0	22.0
					211	23.0	21.0	39.0	36.0	2373.0	27.0	16.0	1124.0	36.0
					315	25.0	27.0	41.0	38.0	3177.0	24.0	33.0	1938.0	37.0
					417	23.0	25.0	31.0	32.0	1999.0	24.0	18.0	1000.0	26.0
					Mean =	23.0	22.8	33.5	30.8	2028.3	24.8	21.8	1258.8	30.3
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	23.0	26.0	28.0	30.0	1647.0	19.0	12.0	259.0	18.0
					204	25.0	23.0	33.0	30.0	2329.0	18.0	10.0	348.0	33.0
					312	22.0	24.0	32.0	30.0	2010.0	37.0	34.0	1722.0	30.0
					409	16.0	17.0	4.0	4.0	50.0	9.0	9.0	224.0	6.0
					Mean =	21.5	22.5	24.3	23.5	1509.0	20.8	16.3	638.3	21.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	23.0	26.0	31.0	30.0	1568.0	24.0	20.0	746.0	27.0
					221	20.0	20.0	24.0	16.0	1578.0	33.0	28.0	1537.0	10.0
					303	27.0	27.0	36.0	43.0	2478.0	22.0	33.0	1275.0	26.0
					408	22.0	15.0	33.0	22.0	2619.0	22.0	26.0	1650.0	25.0
					Mean =	23.0	22.0	31.0	27.8	2060.8	25.3	26.8	1302.0	22.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	23.0	25.0	28.0	33.0	1780.0	34.0	20.0	1359.0	26.0
					213	25.0	22.0	30.0	38.0	2815.0	37.0	21.0	1564.0	26.0
					301	23.0	25.0	40.0	27.0	2340.0	41.0	36.0	2389.0	35.0
					402	26.0	24.0	33.0	20.0	2641.0	34.0	23.0	1547.0	30.0
					Mean =	24.3	24.0	32.8	29.5	2394.0	36.5	25.0	1714.8	29.3
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	23.0	24.0	36.0	34.0	1928.0	21.0	22.0	810.0	27.0
					205	22.0	23.0	33.0	39.0	1686.0	27.0	28.0	1928.0	24.0
					308	24.0	21.0	48.0	50.0	4810.0	37.0	39.0	2771.0	35.0
					418	23.0	23.0	32.0	25.0	2197.0	18.0	21.0	990.0	24.0
					Mean =	23.0	22.8	37.3	37.0	2655.3	25.8	27.5	1624.8	27.5
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	23.0	24.0	20.0	22.0	772.0	21.0	16.0	524.0	24.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	22.0	23.0	19.0	18.0	960.0	29.0	28.0	862.0	25.0
					307	27.0	26.0	29.0	32.0	1958.0	36.0	30.0	1847.0	37.0
					413	28.0	25.0	32.0	31.0	1966.0	28.0	27.0	1146.0	27.0
					Mean =	25.0	24.5	25.0	25.8	1414.0	28.5	25.3	1094.8	28.3

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT4 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -
Rating Data Type					HEIGHT	HEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH
Rating Unit					CM	CM	CM	CM	GRAMS	CM	CM	GRAMS	CM
Rating Date					8/2/2011	8/2/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
Trt-Eval Interval					28DAT	28DAT	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	34	35	36	37	39	40	41	43	44
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	27.0	24.0	36.0	30.0	2197.0	32.0	26.0	1131.0	44.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	25.0	26.0	30.0	26.0	2584.0	34.0	32.0	2339.0	34.0
					306	25.0	19.0	40.0	41.0	2680.0	26.0	21.0	1022.0	25.0
					407	28.0	19.0	26.0	33.0	1425.0	24.0	13.0	524.0	40.0
					Mean =	26.3	22.0	33.0	32.5	2221.5	29.0	23.0	1254.0	35.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	22.0	26.0	23.0	18.0	891.0	26.0	24.0	750.0	29.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	22.0	27.0	38.0	42.0	2872.0	23.0	23.0	1658.0	32.0
					305	28.0	25.0	37.0	52.0	2959.0	28.0	35.0	1349.0	32.0
					411	23.0	27.0	30.0	31.0	2422.0	35.0	28.0	2382.0	19.0
					Mean =	23.8	26.3	32.0	35.8	2286.0	28.0	27.5	1534.8	28.0
15	UNTREATED CONTROL				115	22.0	23.0	30.0	24.0	1294.0	26.0	19.0	782.0	28.0
					203	26.0	30.0	30.0	24.0	1970.0	18.0	21.0	1202.0	20.0
					317	24.0	27.0	22.0	32.0	2451.0	21.0	18.0	582.0	31.0
					405	26.0	24.0	33.0	34.0	2100.0	38.0	27.0	2395.0	24.0
					Mean =	24.5	26.0	28.8	28.5	1953.8	25.8	21.3	1240.3	25.8
16	Clarity (1x)	0.5	lb ae/a	B	116	21.0	22.0	30.0	30.0	1757.0	23.0	25.0	1106.0	16.0
					215	27.0	25.0	31.0	22.0	1678.0	20.0	20.0	1010.0	33.0
					318	22.0	16.0	45.0	46.0	4319.0	20.0	17.0	558.0	16.0
					415	0.0	23.0	33.0	32.0	2213.0	23.0	20.0	1033.0	14.0
					Mean =	17.5	21.5	34.8	32.5	2491.8	21.5	20.5	926.8	19.8
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	24.0	22.0	30.0	24.0	1656.0	25.0	21.0	734.0	28.0
					210	27.0	27.0	35.0	33.0	2326.0	30.0	31.0	1804.0	25.0
					302	27.0	26.0	30.0	41.0	2905.0	25.0	27.0	2087.0	30.0
					412	25.0	23.0	31.0	25.0	2211.0	15.0	32.0	824.0	19.0
					Mean =	25.8	24.5	31.5	30.8	2274.5	23.8	27.8	1362.3	25.5
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	23.0	22.0	23.0	28.0	1600.0	27.0	24.0	1124.0	25.0
					214	25.0	26.0	37.0	31.0	2999.0	30.0	39.0	1823.0	30.0
					309	22.0	12.0	26.0	33.0	2253.0	20.0	22.0	1340.0	27.0
					421	24.0	23.0	30.0	26.0	1619.0	25.0	27.0	1350.0	22.0
					Mean =	23.5	20.8	29.0	29.5	2117.8	25.5	28.0	1409.3	26.0

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT4 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT5 - HEIGHT CM 8/2/2011 28DAT - 1	BRSOK PLANT1 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT1 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT1 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT2 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT2 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT2 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT3 - HEAD DIAMH CM 9/14/2011 HARVEST - 1
						34	35	36	37	39	40	41	43	44
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	25.0	27.0	34.0	28.0	1904.0	26.0	22.0	1299.0	24.0
	Clarity (1/100 x)	0.005	lb ae/a	B	206	21.0	22.0	32.0	26.0	1590.0	31.0	27.0	1550.0	20.0
					311	27.0	24.0	21.0	19.0	577.0	36.0	27.0	2366.0	22.0
					420	24.0	27.0	23.0	25.0	1250.0	25.0	26.0	1195.0	19.0
					Mean =	24.3	25.0	27.5	24.5	1330.3	29.5	25.5	1602.5	21.3
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	20.0	23.0	30.0	27.0	1194.0	31.0	24.0	1337.0	28.0
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	23.0	20.0	35.0	36.0	2358.0	28.0	27.0	1791.0	21.0
					313	26.0	21.0	16.0	19.0	821.0	39.0	36.0	2119.0	29.0
					414	27.0	27.0	25.0	28.0	1600.0	23.0	21.0	1185.0	26.0
					Mean =	24.0	22.8	26.5	27.5	1493.3	30.3	27.0	1608.0	26.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	23.0	22.0	34.0	34.0	2837.0	25.0	22.0	1039.0	32.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	20.0	18.0	31.0	31.0	1911.0	25.0	36.0	1992.0	31.0
					314	21.0	26.0	9.0	11.0	124.0	27.0	32.0	2172.0	32.0
					419	20.0	20.0	29.0	30.0	1596.0	25.0	22.0	814.0	14.0
					Mean =	21.0	21.5	25.8	26.5	1617.0	25.5	28.0	1504.3	27.3

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval # Subsamples, Dec.					BRSOK PLANT3 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT3 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT4 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT4 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT4 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT5 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT5 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT5 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK HEAD - TOTAL NUMBER 9/14/2011 HARVEST
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	45	47	48	49	51	52	53	55	56
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	30.0	1236.0	20.0	20.0	651.0	15.0	13.0	384.0	5.0
					220	40.0	2196.0	10.0	9.0	488.0	23.0	32.0	2020.0	5.0
					310	21.0	1028.0	24.0	28.0	1820.0	37.0	32.0	1826.0	5.0
					406	28.0	908.0	24.0	29.0	3120.0	21.0	18.0	523.0	5.0
					Mean =	29.8	1342.0	19.5	21.5	1519.8	24.0	23.8	1188.3	5.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	30.0	1891.0	28.0	26.0	1537.0	29.0	22.0	1673.0	5.0
					217	22.0	1394.0	23.0	25.0	935.0	45.0	35.0	3150.0	5.0
					304	29.0	1748.0	27.0	22.0	878.0	40.0	30.0	4257.0	5.0
					401	33.0	1400.0	24.0	22.0	915.0	39.0	35.0	2175.0	5.0
					Mean =	28.5	1608.3	25.5	23.8	1066.3	38.3	30.5	2813.8	5.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	20.0	924.0	32.0	21.0	1209.0	17.0	21.0	703.0	5.0
					218	24.0	1879.0	27.0	22.0	1568.0	35.0	30.0	2940.0	5.0
					319	14.0	665.0	25.0	27.0	2042.0	28.0	31.0	2679.0	5.0
					416	26.0	1127.0	16.0	16.0	394.0	32.0	24.0	1696.0	5.0
					Mean =	21.0	1148.8	25.0	21.5	1303.3	28.0	26.5	2004.5	5.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	6.0	118.0	33.0	31.0	1881.0	32.0	30.0	1633.0	5.0
					207	21.0	1361.0	32.0	26.0	1394.0	33.0	33.0	1958.0	5.0
					316	28.0	1539.0	30.0	25.0	1641.0	38.0	31.0	3477.0	5.0
					403	15.0	835.0	29.0	25.0	1324.0	33.0	34.0	2483.0	5.0
					Mean =	17.5	963.3	31.0	26.8	1560.0	34.0	32.0	2387.8	5.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	18.0	1058.0	25.0	22.0	949.0	25.0	22.0	983.0	5.0
					208	14.0	237.0	27.0	24.0	1193.0	35.0	29.0	1228.0	5.0
					320	27.0	924.0	28.0	23.0	1048.0	28.0	25.0	1090.0	5.0
					410	6.0	200.0	24.0	21.0	997.0	34.0	26.0	1921.0	5.0
					Mean =	16.3	604.8	26.0	22.5	1046.8	30.5	25.5	1305.5	5.0

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval # Subsamples, Dec.					BRSOK PLANT3 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT3 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT4 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT4 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT4 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK PLANT5 - HEAD DIAMH CM 9/14/2011 HARVEST - 1	BRSOK PLANT5 - HEAD DIAMV CM 9/14/2011 HARVEST - 1	BRSOK PLANT5 - WEIGHT GRAMS 9/14/2011 HARVEST - 1	BRSOK HEAD - TOTAL NUMBER 9/14/2011 HARVEST
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	45	47	48	49	51	52	53	55	56
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	14.0	761.0	25.0	19.0	1023.0	27.0	25.0	1884.0	5.0
					211	28.0	2029.0	28.0	30.0	1120.0	29.0	30.0	1695.0	5.0
					315	29.0	2449.0	29.0	26.0	1624.0	41.0	36.0	3099.0	5.0
					417	25.0	1021.0	19.0	16.0	597.0	32.0	27.0	1642.0	5.0
					Mean =	24.0	1565.0	25.3	22.8	1091.0	32.3	29.5	2080.0	5.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	20.0	845.0	17.0	21.0	815.0	16.0	12.0	287.0	5.0
					204	31.0	2033.0	8.0	6.0	232.0	35.0	37.0	2483.0	5.0
					312	27.0	1155.0	23.0	27.0	1825.0	30.0	42.0	2096.0	5.0
					409	7.0	86.0	10.0	13.0	163.0	15.0	21.0	665.0	5.0
					Mean =	21.3	1029.8	14.5	16.8	758.8	24.0	28.0	1382.8	5.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	25.0	1125.0	32.0	30.0	1673.0	15.0	10.0	310.0	5.0
					221	12.0	365.0	25.0	32.0	1497.0	32.0	30.0	1642.0	5.0
					303	32.0	1518.0	29.0	24.0	1582.0	42.0	38.0	2983.0	5.0
					408	22.0	1620.0	27.0	22.0	1719.0	4.0	7.0	184.0	5.0
					Mean =	22.8	1157.0	28.3	27.0	1617.8	23.3	21.3	1279.8	5.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	19.0	817.0	35.0	21.0	1590.0	28.0	25.0	2232.0	5.0
					213	24.0	1407.0	32.0	33.0	1539.0	35.0	31.0	2259.0	5.0
					301	38.0	2438.0	36.0	35.0	2368.0	39.0	42.0	2715.0	5.0
					402	23.0	1712.0	31.0	32.0	2443.0	35.0	31.0	1644.0	5.0
					Mean =	26.0	1593.5	33.5	30.3	1985.0	34.3	32.3	2212.5	5.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	23.0	951.0	30.0	25.0	1300.0	0.0	0.0	0.0	4.0
					205	18.0	798.0	32.0	29.0	1269.0	24.0	30.0	1481.0	5.0
					308	31.0	2459.0	18.0	14.0	573.0	47.0	43.0	3691.0	5.0
					418	21.0	1588.0	11.0	14.0	435.0	24.0	27.0	2021.0	5.0
					Mean =	23.3	1449.0	22.8	20.5	894.3	23.8	25.0	1798.3	4.8
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	18.0	852.0	29.0	25.0	1199.0	33.0	30.0	1937.0	5.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	24.0	982.0	26.0	24.0	801.0	29.0	33.0	1992.0	5.0
					307	24.0	1691.0	35.0	29.0	1822.0	38.0	37.0	2835.0	5.0
					413	25.0	867.0	27.0	30.0	1173.0	30.0	32.0	1912.0	5.0
					Mean =	22.8	1098.0	29.3	27.0	1248.8	32.5	33.0	2169.0	5.0

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT3 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (45)	BRSOK PLANT3 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (47)	BRSOK PLANT4 - HEAD DIAMH CM 9/14/2011 HARVEST - 1 (48)	BRSOK PLANT4 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (49)	BRSOK PLANT4 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (51)	BRSOK PLANT5 - HEAD DIAMH CM 9/14/2011 HARVEST - 1 (52)	BRSOK PLANT5 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (53)	BRSOK PLANT5 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (55)	BRSOK HEAD - TOTAL NUMBER 9/14/2011 HARVEST (56)
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	31.0	2754.0	28.0	24.0	1279.0	45.0	36.0	2902.0	5.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	24.0	2020.0	30.0	34.0	2007.0	35.0	36.0	2560.0	5.0
					306	25.0	1151.0	35.0	35.0	2011.0	36.0	31.0	2225.0	5.0
					407	35.0	2352.0	36.0	26.0	2276.0	21.0	21.0	612.0	5.0
					Mean =	28.8	2069.3	32.3	29.8	1893.3	34.3	31.0	2074.8	5.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	30.0	1217.0	30.0	28.0	1316.0	29.0	29.0	1278.0	5.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	38.0	2915.0	29.0	37.0	2171.0	32.0	36.0	1910.0	5.0
					305	23.0	1232.0	29.0	30.0	1975.0	39.0	43.0	3052.0	5.0
					411	21.0	987.0	28.0	25.0	1102.0	26.0	37.0	1701.0	5.0
					Mean =	28.0	1587.8	29.0	30.0	1641.0	31.5	36.3	1985.3	5.0
15	UNTREATED CONTROL				115	26.0	858.0	13.0	13.0	345.0	29.0	25.0	1150.0	5.0
					203	25.0	1216.0	19.0	12.0	873.0	41.0	29.0	3052.0	5.0
					317	29.0	1799.0	31.0	27.0	1701.0	48.0	35.0	3891.0	5.0
					405	21.0	848.0	30.0	32.0	1882.0	37.0	31.0	1899.0	5.0
					Mean =	25.3	1180.3	23.3	21.0	1200.3	38.8	30.0	2498.0	5.0
16	Clarity (1x)	0.5	lb ae/a	B	116	13.0	532.0	21.0	17.0	935.0	32.0	28.0	1518.0	5.0
					215	20.0	1090.0	39.0	26.0	1298.0	20.0	24.0	762.0	5.0
					318	15.0	535.0	33.0	29.0	1764.0	9.0	8.0	126.0	5.0
					415	15.0	777.0	26.0	20.0	1193.0	26.0	27.0	1023.0	5.0
					Mean =	15.8	733.5	29.8	23.0	1297.5	21.8	21.8	857.3	5.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	24.0	1206.0	18.0	17.0	735.0	31.0	26.0	1590.0	5.0
					210	27.0	1170.0	27.0	27.0	1556.0	42.0	39.0	2543.0	5.0
					302	21.0	1185.0	21.0	22.0	1545.0	50.0	34.0	3997.0	5.0
					412	23.0	925.0	23.0	23.0	1045.0	28.0	30.0	1500.0	5.0
					Mean =	23.8	1121.5	22.3	22.3	1220.3	37.8	32.3	2407.5	5.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	17.0	920.0	27.0	24.0	1131.0	25.0	20.0	886.0	5.0
					214	27.0	1547.0	36.0	25.0	2152.0	37.0	20.0	3025.0	5.0
					309	19.0	1196.0	0.0	0.0	0.0	36.0	41.0	2155.0	4.0
					421	15.0	611.0	30.0	21.0	1141.0	34.0	32.0	1472.0	5.0
					Mean =	19.5	1068.5	23.3	17.5	1106.0	33.0	28.3	1884.5	4.8

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK PLANT3 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (45)	BRSOK PLANT3 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (47)	BRSOK PLANT4 - HEAD DIAMH CM 9/14/2011 HARVEST - 1 (48)	BRSOK PLANT4 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (49)	BRSOK PLANT4 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (51)	BRSOK PLANT5 - HEAD DIAMH CM 9/14/2011 HARVEST - 1 (52)	BRSOK PLANT5 - HEAD DIAMV CM 9/14/2011 HARVEST - 1 (53)	BRSOK PLANT5 - WEIGHT GRAMS 9/14/2011 HARVEST - 1 (55)	BRSOK HEAD - TOTAL NUMBER 9/14/2011 HARVEST (56)
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	24.0	1112.0	25.0	27.0	1392.0	30.0	31.0	2595.0	5.0
	Clarity (1/100 x)	0.005	lb ae/a	B	206	17.0	680.0	25.0	29.0	1178.0	19.0	14.0	646.0	5.0
					311	39.0	2669.0	40.0	35.0	2715.0	39.0	33.0	2569.0	5.0
					420	21.0	893.0	24.0	22.0	867.0	29.0	21.0	1172.0	5.0
					Mean =	25.3	1338.5	28.5	28.3	1538.0	29.3	24.8	1745.5	5.0
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	30.0	1697.0	31.0	27.0	1368.0	36.0	32.0	2246.0	5.0
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	34.0	2544.0	20.0	19.0	601.0	42.0	39.0	3524.0	5.0
					313	27.0	1446.0	29.0	24.0	1444.0	23.0	40.0	1256.0	5.0
					414	19.0	960.0	0.0	0.0	0.0	31.0	23.0	1405.0	4.0
					Mean =	27.5	1661.8	20.0	17.5	853.3	33.0	33.5	2107.8	4.8
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	28.0	1813.0	31.0	29.0	1547.0	26.0	22.0	1623.0	5.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	25.0	1030.0	35.0	26.0	2083.0	23.0	17.0	693.0	5.0
					314	33.0	1822.0	33.0	28.0	2290.0	14.0	20.0	623.0	5.0
					419	12.0	234.0	29.0	30.0	1550.0	30.0	26.0	1207.0	5.0
					Mean =	24.5	1224.8	32.0	28.3	1867.5	23.3	21.3	1036.5	5.0

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK HEAD - TOTAL GRAMS 9/14/2011 HARVEST 57	BRSOK HEAD - AVERAGE GRAMS 9/14/2011 HARVEST - 1 58
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0
					219	0.0	0.0
					321	0.0	0.0
					404	0.0	0.0
					Mean =	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	5126.0	1025.2
					220	8051.0	1610.2
					310	8618.0	1723.6
					406	6850.0	1370.0
					Mean =	7161.3	1432.3
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	8800.0	1760.0
					217	9404.0	1880.8
					304	10398.0	2079.6
					401	7860.0	1572.0
					Mean =	9115.5	1823.1
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	4227.0	845.4
					218	9137.0	1827.4
					319	8260.0	1652.0
					416	6432.0	1286.4
					Mean =	7014.0	1402.8
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	7001.0	1400.2
					207	7776.0	1555.2
					316	12230.0	2446.0
					403	8412.0	1682.4
					Mean =	8854.8	1771.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	5710.0	1142.0
					208	7374.0	1474.8
					320	6009.0	1201.8
					410	6760.0	1352.0
					Mean =	6463.3	1292.7

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK HEAD - TOTAL GRAMS 9/14/2011 HARVEST 57	BRSOK HEAD - AVERAGE GRAMS 9/14/2011 HARVEST - 1 58
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	5205.0	1041.0
					211	8341.0	1668.2
					315	12287.0	2457.4
					417	6259.0	1251.8
					Mean =	8023.0	1604.6
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	3853.0	770.6
					204	7425.0	1485.0
					312	8808.0	1761.6
					409	1188.0	237.6
					Mean =	5318.5	1063.7
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	5422.0	1084.4
					221	6619.0	1323.8
					303	9836.0	1967.2
					408	7792.0	1558.4
					Mean =	7417.3	1483.5
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	7778.0	1555.6
					213	9584.0	1916.8
					301	12250.0	2450.0
					402	9987.0	1997.4
					Mean =	9899.8	1980.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	4989.0	997.8
					205	7162.0	1432.4
					308	14304.0	2860.8
					418	7231.0	1446.2
					Mean =	8421.5	1684.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	5284.0	1056.8
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	5597.0	1119.4
					307	10153.0	2030.6
					413	7064.0	1412.8
					Mean =	7024.5	1404.9

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK HEAD - TOTAL GRAMS 9/14/2011 HARVEST 57	BRSOK HEAD - AVERAGE GRAMS 9/14/2011 HARVEST - 1 58
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	10263.0	2052.6
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	11510.0	2302.0
					306	9089.0	1817.8
					407	7189.0	1437.8
					Mean =	9512.8	1902.6
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	5452.0	1090.4
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	11526.0	2305.2
					305	10567.0	2113.4
					411	8594.0	1718.8
					Mean =	9034.8	1807.0
15	UNTREATED CONTROL				115	4429.0	885.8
					203	8313.0	1662.6
					317	10424.0	2084.8
					405	9124.0	1824.8
					Mean =	8072.5	1614.5
16	Clarity (1x)	0.5	lb ae/a	B	116	5848.0	1169.6
					215	5838.0	1167.6
					318	7302.0	1460.4
					415	6239.0	1247.8
					Mean =	6306.8	1261.4
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	5921.0	1184.2
					210	9399.0	1879.8
					302	11719.0	2343.8
					412	6505.0	1301.0
					Mean =	8386.0	1677.2
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	5661.0	1132.2
					214	11546.0	2309.2
					309	6944.0	1388.8
					421	6193.0	1238.6
					Mean =	7586.0	1517.2

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOK HEAD - TOTAL GRAMS 9/14/2011 HARVEST 57	BRSOK HEAD - AVERAGE GRAMS 9/14/2011 HARVEST - 1 58
19	Durango (1/100 x)	0.0075	lb ae/a	B	119	8302.0	1660.4
	Clarity (1/100 x)	0.005	lb ae/a	B	206	5644.0	1128.8
					311	10896.0	2179.2
					420	5377.0	1075.4
					Mean =	7554.8	1511.0
20	Durango (1/200 x)	0.00374	lb ae/a	B	120	7842.0	1568.4
	Clarity (1/200 x)	0.0025	lb ae/a	B	202	10818.0	2163.6
					313	7086.0	1417.2
					414	5150.0	1030.0
					Mean =	7724.0	1544.8
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	8859.0	1771.8
	Durango (1/400 x)	0.00187	lb ae/a	B	209	7709.0	1541.8
					314	7031.0	1406.2
					419	5401.0	1080.2
					Mean =	7250.0	1450.0

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	BROCCHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Crop Code
BRSOK = BROCCOLI / BRASSICA OLERACEA L. VAR. BOTRYTIS SUBVAR. CYMOSA LAM.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
LEAF = LEAF / FOLIAGE
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
	Rating Unit				%	%	%	%	%	%	%	%	%	CM	CM
	Rating Date				7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
	# Subsamples, Dec.						- 0	- 0			- 0	- 0	- 0	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.0 a	43 a	36 a	1.3 a	7.5 a	63 a	65 a	35 a	11.8 a	12.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.0 a	0.0 a	1 b	8 b	0.0 a	0.0 a	6 c	9 bc	11 b	13.3 a	13.5 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.0 a	0.0 a	0 b	0 b	0.0 a	0.0 a	6 c	9 bc	10 b	14.3 a	14.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0 b	0 b	0.0 a	2.5 a	1 c	5 bc	5 b	13.3 a	13.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.0 a	0.0 a	0 b	5 b	0.0 a	1.3 a	4 c	8 bc	9 b	13.0 a	13.3 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.0 a	0 b	4 b	0.0 a	2.5 a	3 c	5 bc	4 b	12.5 a	12.3 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0.0 a	0.0 a	0 b	0 b	0.0 a	0.0 a	6 c	9 bc	14 b	12.5 a	13.5 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0 b	4 b	0.0 a	1.3 a	5 c	11 bc	9 b	12.5 a	12.3 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	0.0 a	0.0 a	1 b	4 b	0.0 a	0.0 a	3 c	5 bc	6 b	13.5 a	11.3 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.0 a	0.0 a	1 b	0 b	0.0 a	1.3 a	6 c	8 bc	10 b	14.3 a	13.5 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0.0 a	0.0 a	0 b	5 b	0.0 a	2.5 a	4 c	4 bc	6 b	15.0 a	13.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	0.0 a	0.0 a	3 b	5 b	0.0 a	1.3 a	8 c	11 bc	13 b	13.5 a	13.3 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0.0 a	0.0 a	1 b	0 b	0.0 a	3.8 a	5 c	9 bc	8 b	12.3 a	13.8 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	0.0 a	0.0 a	1 b	0 b	0.0 a	2.5 a	4 c	6 bc	5 b	12.8 a	13.3 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0.0 a	0.0 a	0 b	0 b	0.0 a	0.0 a	0 c	0 c	0 b	14.5 a	13.0 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a	0.0 a	35 a	34 a	0.0 a	1.3 a	31 b	31 b	30 a	13.5 a	13.3 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	0.0 a	0.0 a	1 b	3 b	0.0 a	2.5 a	4 c	5 bc	8 b	13.5 a	13.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.0 a	0.0 a	0 b	0 b	0.0 a	0.0 a	18 bc	25 bc	14 b	13.3 a	13.3 a
19	Durango (1/100 x)	0.0075	lb ae/a	B	0.0 a	0.0 a	1 b	3 b	0.0 a	1.3 a	5 c	8 bc	6 b	13.0 a	14.0 a
	Clarity (1/100 x)	0.005	lb ae/a	B											
20	Durango (1/200 x)	0.00374	lb ae/a	B	0.0 a	0.0 a	0 b	3 b	0.0 a	2.5 a	8 c	11 bc	10 b	12.8 a	12.8 a
	Clarity (1/200 x)	0.0025	lb ae/a	B											

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated				PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -
Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	STUNT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT
Rating Unit				%	%	%	%	%	%	%	%	%	CM	CM
Rating Date				7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7DAT	7DAT
# Subsamples, Dec.						- 0	- 0			- 0	- 0	- 0	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.0 a	0.0 a	0 b	3 b	0.0 a	0.0 a	4 c	4 bc	5 b	13.8 a	13.8 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					0.00	0.00	9.0	10.2	0.77	4.45	15.2	15.9	12.0	2.39	2.04
Standard Deviation					0.00	0.00	6.4	7.2	0.55	3.14	10.7	11.2	8.5	1.69	1.44
CV					0.0	0.0	151.04	133.18	916.52	195.69	117.66	95.88	82.19	12.77	11.02
Bartlett's X2					0.0	0.0	50.198	24.334	0.0	17.377	98.773	92.961	59.295	33.58	25.417
P(Bartlett's X2)					.	.	0.001*	0.018*	.	0.183	0.001*	0.001*	0.001*	0.029*	0.186
Replicate F					0.000	0.000	1.118	0.616	1.000	2.116	1.212	0.385	0.913	0.637	3.031
Replicate Prob(F)					1.0000	1.0000	0.3491	0.6075	0.3992	0.1076	0.3131	0.7640	0.4403	0.5943	0.0361
Treatment F					0.000	0.000	13.123	7.822	1.000	1.273	6.751	6.266	3.716	0.885	0.893
Treatment Prob(F)					1.0000	1.0000	0.0001	0.0001	0.4756	0.2327	0.0001	0.0001	0.0001	0.6057	0.5958

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21	22	23
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	CM	%	%	%	%	%	CM	CM	CM	CM
	Rating Date				7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
	Trt-Eval Interval				7DAT	7DAT	7 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT	14DAT
	# Subsamples, Dec.				- 1	- 1	- 1	- 0	- 0	- 0	- 0		- 1	- 1	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	11.3 a	11.3 b	13.0 a	83 a	53 a	98 a	94 a	5.0 a	11.0 b	12.3 b	11.8 b	11.8 c
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	12.3 a	11.5 b	11.3 a	0 b	0 b	3 c	20 c	5.0 a	16.8 a	17.8 a	15.5 a	15.5 ab
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	14.0 a	13.3 ab	14.8 a	0 b	0 b	1 c	8 c	3.8 a	16.8 a	17.3 a	17.8 a	17.3 ab
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	13.3 a	13.0 ab	13.8 a	0 b	1 b	1 c	9 c	3.8 a	15.8 a	16.5 a	17.3 a	17.3 ab
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	11.8 a	13.3 ab	11.8 a	0 b	0 b	4 c	11 c	6.3 a	16.5 a	15.8 a	15.5 a	17.3 ab
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	12.5 a	12.3 ab	13.0 a	0 b	0 b	0 c	10 c	1.3 a	15.8 a	16.0 a	15.8 a	16.3 ab
7	CLARITY (1/50 X)	0.01	lb ae/a	B	15.3 a	13.5 ab	13.0 a	0 b	1 b	0 c	6 c	3.8 a	16.3 a	17.0 a	17.5 a	16.5 ab
8	CLARITY (1/100 X)	0.005	lb ae/a	B	12.3 a	11.8 ab	12.3 a	0 b	1 b	0 c	20 c	10.0 a	15.8 a	16.0 a	15.8 a	14.3 b
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	12.3 a	13.3 ab	13.5 a	0 b	1 b	0 c	15 c	3.8 a	17.3 a	16.0 a	16.8 a	17.0 ab
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	13.5 a	13.0 ab	13.5 a	0 b	0 b	4 c	1 c	1.3 a	18.3 a	17.3 a	17.5 a	17.3 ab
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	13.3 a	13.0 ab	12.3 a	0 b	0 b	3 c	6 c	0.0 a	18.3 a	16.3 a	16.3 a	16.0 ab
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	12.8 a	14.0 ab	14.8 a	0 b	0 b	0 c	4 c	1.3 a	16.3 a	16.5 a	16.8 a	17.8 ab
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	13.8 a	14.8 a	14.0 a	0 b	0 b	0 c	3 c	0.0 a	18.0 a	18.0 a	17.0 a	18.8 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	14.0 a	14.3 ab	13.0 a	0 b	0 b	1 c	4 c	0.0 a	17.5 a	17.8 a	18.3 a	18.5 ab
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL				13.0 a	12.5 ab	13.3 a	0 b	0 b	1 c	4 c	3.8 a	18.0 a	17.5 a	18.0 a	15.5 ab
16	Clarity (1x)	0.5	lb ae/a	B	12.8 a	12.8 ab	12.8 a	0 b	3 b	56 b	46 b	0.0 a	16.3 a	16.8 a	16.5 a	16.8 ab
17	Durango (1/100 x)	0.0075	lb ae/a	B	14.0 a	13.8 ab	12.8 a	0 b	0 b	0 c	6 c	0.0 a	17.5 a	17.3 a	17.3 a	18.0 ab
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	13.5 a	14.0 ab	14.3 a	0 b	0 b	0 c	5 c	1.3 a	17.0 a	17.5 a	17.0 a	17.8 ab
19	Durango (1/100 x)	0.0075	lb ae/a	B	13.5 a	13.8 ab	12.5 a	0 b	0 b	0 c	3 c	2.5 a	16.3 a	17.5 a	17.5 a	17.3 ab
	Clarity (1/100 x)	0.005	lb ae/a	B												
20	Durango (1/200 x)	0.00374	lb ae/a	B	12.8 a	13.0 ab	13.8 a	0 b	0 b	3 c	4 c	7.5 a	15.8 a	17.0 a	17.0 a	17.0 ab
	Clarity (1/200 x)	0.0025	lb ae/a	B												

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated				PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
Rating Data Type				HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	HEIGHT	HEIGHT	HEIGHT	HEIGHT
Rating Unit				CM	CM	CM	%	%	%	%	%	CM	CM	CM	CM
Rating Date				7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
Trt-Eval Interval				7DAT	7DAT	7 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT	14DAT
# Subsamples, Dec.				- 1	- 1	- 1	- 0	- 0	- 0	- 0		- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21	22	23
21	Clarity (1/400 x)	0.00125	lb ae/a	B	12.5 a	12.5 ab	12.3 a	0 b	0 b	0 c	3 c	2.5 a	16.8 a	17.0 a	16.3 a	17.0 ab
	Durango (1/400 x)	0.00187	lb ae/a	B												
LSD (P=.05)					2.05	1.67	2.64	10.8	5.6	12.3	15.5	6.79	2.21	2.58	2.39	2.38
Standard Deviation					1.45	1.18	1.87	7.6	3.9	8.7	10.9	4.80	1.56	1.83	1.69	1.68
CV					11.1	9.03	14.24	194.41	137.78	105.0	81.96	161.44	9.43	10.94	10.16	10.08
Bartlett's X2					27.428	17.152	29.151	0.0	23.362	60.749	40.199	18.553	31.561	16.74	20.992	33.61
P(Bartlett's X2)					0.124	0.643	0.085	.	0.001*	0.001*	0.005*	0.235	0.048*	0.67	0.398	0.029*
Replicate F					0.348	1.629	0.541	1.000	2.049	1.119	2.678	1.839	4.553	2.743	1.811	2.248
Replicate Prob(F)					0.7906	0.1921	0.6562	0.3992	0.1166	0.3487	0.0550	0.1497	0.0061	0.0509	0.1548	0.0919
Treatment F					1.569	2.317	0.965	22.224	33.522	29.910	14.734	1.285	3.802	1.765	2.631	3.336
Treatment Prob(F)					0.0918	0.0065	0.5137	0.0001	0.0001	0.0001	0.0001	0.2244	0.0001	0.0472	0.0020	0.0002

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	24	25	26	27	28	29	30	31	32	33	34	35
	Crop Code															
	Part Rated				BRSOK PLANT5 -	BRSOK PLANT -	BRSOK PLANT -	BRSOK PLANT -	BRSOK PLANT -	LEAF -	PLANT -	BRSOK PLANT1 -	BRSOK PLANT2 -	BRSOK PLANT3 -	BRSOK PLANT4 -	BRSOK PLANT5 -
	Rating Data Type				HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	STUNT	HEIGHT	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	%	%	%	%	%	%	CM	CM	CM	CM	CM
	Rating Date				7/19/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011
	Trt-Eval Interval				14DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21DAT	28DAT	28DAT	28DAT	28DAT	28DAT
	# Subsamples, Dec.				- 1	- 0	- 0	- 0	- 0			- 1	- 1	- 1	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	13.3 a	99 a	99 a	76 a	99 a	75.0 a	98.8 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	15.0 a	0 b	5 c	0 b	19 bc	8.8 b	10.0 bc	22.5 a	24.0 a	23.0 a	22.5 a	21.5 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	17.5 a	0 b	3 c	0 b	6 c	5.0 b	2.5 c	24.3 a	23.0 a	23.5 a	22.8 a	22.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	17.5 a	0 b	1 c	0 b	6 c	5.0 b	2.5 c	20.5 a	22.0 a	22.8 a	23.5 a	23.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	17.0 a	0 b	1 c	0 b	4 c	2.5 b	0.0 c	21.0 a	23.0 a	20.8 a	25.5 a	22.5 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	16.3 a	0 b	0 c	0 b	3 c	0.0 b	1.3 c	21.8 a	23.0 a	22.5 a	23.8 a	24.8 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	18.3 a	0 b	5 c	0 b	10 c	1.3 b	3.8 c	21.3 a	23.5 a	24.0 a	23.0 a	22.8 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	16.3 a	0 b	4 c	0 b	14 c	6.3 b	6.3 c	20.0 a	22.3 a	23.0 a	21.5 a	22.5 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	15.3 a	0 b	6 c	0 b	5 c	3.8 b	0.0 c	21.3 a	23.0 a	21.3 a	23.0 a	22.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	17.0 a	0 b	4 c	0 b	6 c	1.3 b	1.3 c	23.3 a	24.3 a	23.0 a	24.3 a	24.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	15.8 a	0 b	0 c	0 b	3 c	0.0 b	1.3 c	23.3 a	25.0 a	22.5 a	23.0 a	22.8 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	17.8 a	0 b	0 c	0 b	6 c	3.8 b	3.8 c	21.0 a	23.0 a	24.0 a	25.0 a	24.5 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	17.8 a	0 b	1 c	0 b	8 c	3.8 b	2.5 c	21.5 a	25.8 a	23.3 a	26.3 a	22.0 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	17.5 a	0 b	0 c	0 b	0 c	0.0 b	0.0 c	23.0 a	25.5 a	24.3 a	23.8 a	26.3 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL				17.0 a	0 b	0 c	0 b	0 c	0.0 b	0.0 c	24.3 a	24.3 a	24.8 a	24.5 a	26.0 a
16	Clarity (1x)	0.5	lb ae/a	B	17.3 a	0 b	31 b	0 b	29 b	23.8 b	15.0 b	22.5 a	23.8 a	22.3 a	17.5 a	21.5 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	17.0 a	0 b	1 c	0 b	3 c	5.0 b	2.5 c	23.0 a	24.5 a	24.0 a	25.8 a	24.5 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	17.0 a	0 b	0 c	0 b	4 c	0.0 b	2.5 c	21.8 a	23.8 a	20.8 a	23.5 a	20.8 a
19	Durango (1/100 x)	0.0075	lb ae/a	B	17.3 a	0 b	3 c	0 b	4 c	1.3 b	1.3 c	20.5 a	23.8 a	25.5 a	24.3 a	25.0 a
	Clarity (1/100 x)	0.005	lb ae/a	B												
20	Durango (1/200 x)	0.00374	lb ae/a	B	18.0 a	0 b	4 c	0 b	6 c	2.5 b	3.8 c	20.0 a	24.3 a	24.5 a	24.0 a	22.8 a
	Clarity (1/200 x)	0.0025	lb ae/a	B												

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The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK			BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated				PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	LEAF -	PLANT -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -
Rating Data Type				HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	CURL	STUNT	HEIGHT	HEIGHT	HEIGHT	HEIGHT	HEIGHT
Rating Unit				CM	%	%	%	%	%	%	CM	CM	CM	CM	CM
Rating Date				7/19/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011
Trt-Eval Interval				14DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21DAT	28DAT	28DAT	28DAT	28DAT	28DAT
# Subsamples, Dec.				- 1	- 0	- 0	- 0	- 0			- 1	- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	24	25	26	27	28	29	30	31	32	33	34	35
21	Clarity (1/400 x)	0.00125	lb ae/a	B	15.3 a	0 b	0 c	0 b	1 c	0.0 b	0.0 c	20.5 a	23.3 a	22.8 a	21.0 a	21.5 a
	Durango (1/400 x)	0.00187	lb ae/a	B												
LSD (P=.05)					2.68	0.8	4.3	13.6	11.0	16.89	6.22	3.71	3.59	4.36	4.86	4.95
Standard Deviation					1.89	0.5	3.1	9.7	7.8	11.94	4.40	2.62	2.54	3.09	3.44	3.50
CV					11.33	11.6	38.39	265.82	69.93	168.56	58.15	12.6	11.23	14.02	15.41	15.88
Bartlett's X2					30.322	0.0	10.07	0.0	47.203	81.972	31.232	24.692	33.083	14.996	49.586	28.888
P(Bartlett's X2)					0.065	.	0.688	.	0.001*	0.001*	0.008*	0.171	0.024*	0.723	0.001*	0.068
Replicate F					0.420	1.000	0.889	1.000	0.319	1.205	0.590	0.268	0.796	0.932	1.080	0.035
Replicate Prob(F)					0.7391	0.3992	0.4521	0.3992	0.8114	0.3159	0.6237	0.8483	0.5012	0.4310	0.3646	0.9911
Treatment F					1.653	6241.001	203.565	11.888	29.560	7.555	93.092	14.204	17.239	11.331	10.031	9.097
Treatment Prob(F)					0.0693	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	36	37	39	40	41	43	44	45	47	48
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -
	Rating Data Type				HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH
	Rating Unit				CM	CM	GRAMS	CM	CM	GRAMS	CM	CM	GRAMS	CM
	Rating Date				9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 c
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	30.5 a	32.0 a	2019.3 a	24.3 ab	22.5 a	1092.0 ab	23.8 a	29.8 a	1342.0 ab	19.5 ab
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	36.0 a	35.0 a	2466.5 a	22.5 ab	27.0 a	1160.8 a	30.8 a	28.5 a	1608.3 a	25.5 ab
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	29.0 a	23.8 a	1538.8 a	21.5 ab	20.5 a	1018.8 ab	25.0 a	21.0 a	1148.8 ab	25.0 ab
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	34.5 a	32.8 a	2104.5 a	28.3 ab	31.0 a	1839.3 a	21.3 a	17.5 a	963.3 ab	31.0 ab
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	35.0 a	32.5 a	2301.3 a	25.0 ab	25.0 a	1205.0 a	19.5 a	16.3 a	604.8 ab	26.0 ab
7	CLARITY (1/50 X)	0.01	lb ae/a	B	33.5 a	30.8 a	2028.3 a	24.8 ab	21.8 a	1258.8 a	30.3 a	24.0 a	1565.0 a	25.3 ab
8	CLARITY (1/100 X)	0.005	lb ae/a	B	24.3 a	23.5 a	1509.0 a	20.8 b	16.3 a	638.3 ab	21.8 a	21.3 a	1029.8 ab	14.5 b
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	31.0 a	27.8 a	2060.8 a	25.3 ab	26.8 a	1302.0 a	22.0 a	22.8 a	1157.0 ab	28.3 ab
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	32.8 a	29.5 a	2394.0 a	36.5 a	25.0 a	1714.8 a	29.3 a	26.0 a	1593.5 a	33.5 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	37.3 a	37.0 a	2655.3 a	25.8 ab	27.5 a	1624.8 a	27.5 a	23.3 a	1449.0 a	22.8 ab
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	25.0 a	25.8 a	1414.0 a	28.5 ab	25.3 a	1094.8 ab	28.3 a	22.8 a	1098.0 ab	29.3 ab
	DURANGO (1/100 X)	0.0075	lb ae/a	B										
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	33.0 a	32.5 a	2221.5 a	29.0 ab	23.0 a	1254.0 a	35.8 a	28.8 a	2069.3 a	32.3 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B										
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	32.0 a	35.8 a	2286.0 a	28.0 ab	27.5 a	1534.8 a	28.0 a	28.0 a	1587.8 a	29.0 ab
	DURANGO (1/400 X)	0.00187	lb ae/a	B										
15	UNTREATED CONTROL				28.8 a	28.5 a	1953.8 a	25.8 ab	21.3 a	1240.3 a	25.8 a	25.3 a	1180.3 ab	23.3 ab
16	Clarity (1x)	0.5	lb ae/a	B	34.8 a	32.5 a	2491.8 a	21.5 ab	20.5 a	926.8 ab	19.8 a	15.8 a	733.5 ab	29.8 ab
17	Durango (1/100 x)	0.0075	lb ae/a	B	31.5 a	30.8 a	2274.5 a	23.8 ab	27.8 a	1362.3 a	25.5 a	23.8 a	1121.5 ab	22.3 ab
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	29.0 a	29.5 a	2117.8 a	25.5 ab	28.0 a	1409.3 a	26.0 a	19.5 a	1068.5 ab	23.3 ab
19	Durango (1/100 x)	0.0075	lb ae/a	B	27.5 a	24.5 a	1330.3 a	29.5 ab	25.5 a	1602.5 a	21.3 a	25.3 a	1338.5 ab	28.5 ab
	Clarity (1/100 x)	0.005	lb ae/a	B										
20	Durango (1/200 x)	0.00374	lb ae/a	B	26.5 a	27.5 a	1493.3 a	30.3 ab	27.0 a	1608.0 a	26.0 a	27.5 a	1661.8 a	20.0 ab
	Clarity (1/200 x)	0.0025	lb ae/a	B										

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated				PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -
Rating Data Type				HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	HEAD DIAMH
Rating Unit				CM	CM	GRAMS	CM	CM	GRAMS	CM	CM	GRAMS	CM
Rating Date				9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.				- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	36	37	39	40	41	43	44	45	47	48
21	Clarity (1/400 x) Durango (1/400 x)	0.00125 0.00187	lb ae/a lb ae/a	B B	25.8 a	26.5 a	1617.0 a	25.5 ab	28.0 a	1504.3 a	27.3 a	24.5 a	1224.8 ab	32.0 a
LSD (P=.05)					9.84	10.93	1007.81	8.43	8.19	752.50	9.04	9.14	800.71	9.60
Standard Deviation					6.96	7.73	712.63	5.96	5.79	532.10	6.39	6.46	566.18	6.79
CV					23.66	27.14	37.16	23.99	24.48	42.34	26.1	28.79	46.54	27.38
Bartlett's X2					21.006	14.74	17.165	25.511	14.945	10.809	18.411	15.429	17.039	48.47
P(Bartlett's X2)					0.336	0.739	0.579	0.144	0.726	0.93	0.495	0.695	0.587	0.001*
Replicate F					1.388	4.327	4.817	1.824	6.605	4.821	2.914	3.105	3.799	1.421
Replicate Prob(F)					0.2552	0.0079	0.0045	0.1525	0.0006	0.0045	0.0415	0.0331	0.0146	0.2454
Treatment F					4.889	3.835	2.710	5.093	4.917	2.328	4.671	4.060	2.374	4.769
Treatment Prob(F)					0.0001	0.0001	0.0015	0.0001	0.0001	0.0062	0.0001	0.0001	0.0052	0.0001

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BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	49	51	52	53	55	56	57	58
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	HEAD -	HEAD -	HEAD -
	Rating Data Type				HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	TOTAL	TOTAL	AVERAGE
	Rating Unit				CM	GRAMS	CM	CM	GRAMS	NUMBER	GRAMS	GRAMS
	Rating Date				9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				- 1	- 1	- 1	- 1	- 1			- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	21.5 a	1519.8 a	24.0 a	23.8 a	1188.3 ab	5.0 a	7161.3 a	1432.3 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	23.8 a	1066.3 ab	38.3 a	30.5 a	2813.8 a	5.0 a	9115.5 a	1823.1 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	21.5 a	1303.3 ab	28.0 a	26.5 a	2004.5 a	5.0 a	7014.0 a	1402.8 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	26.8 a	1560.0 a	34.0 a	32.0 a	2387.8 a	5.0 a	8854.8 a	1771.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	22.5 a	1046.8 ab	30.5 a	25.5 a	1305.5 ab	5.0 a	6463.3 a	1292.7 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	22.8 a	1091.0 ab	32.3 a	29.5 a	2080.0 a	5.0 a	8023.0 a	1604.6 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	16.8 a	758.8 ab	24.0 a	28.0 a	1382.8 ab	5.0 a	5318.5 a	1063.7 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	27.0 a	1617.8 a	23.3 a	21.3 a	1279.8 ab	5.0 a	7417.3 a	1483.5 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	30.3 a	1985.0 a	34.3 a	32.3 a	2212.5 a	5.0 a	9899.8 a	1980.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	20.5 a	894.3 ab	23.8 a	25.0 a	1798.3 a	4.8 a	8421.5 a	1684.3 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	27.0 a	1248.8 ab	32.5 a	33.0 a	2169.0 a	5.0 a	7024.5 a	1404.9 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B								
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	29.8 a	1893.3 a	34.3 a	31.0 a	2074.8 a	5.0 a	9512.8 a	1902.6 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B								
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	30.0 a	1641.0 a	31.5 a	36.3 a	1985.3 a	5.0 a	9034.8 a	1807.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B								
15	UNTREATED CONTROL				21.0 a	1200.3 ab	38.8 a	30.0 a	2498.0 a	5.0 a	8072.5 a	1614.5 a
16	Clarity (1x)	0.5	lb ae/a	B	23.0 a	1297.5 ab	21.8 a	21.8 a	857.3 ab	5.0 a	6306.8 a	1261.4 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	22.3 a	1220.3 ab	37.8 a	32.3 a	2407.5 a	5.0 a	8386.0 a	1677.2 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	17.5 a	1106.0 ab	33.0 a	28.3 a	1884.5 a	4.8 a	7586.0 a	1517.2 a
19	Durango (1/100 x)	0.0075	lb ae/a	B	28.3 a	1538.0 a	29.3 a	24.8 a	1745.5 a	5.0 a	7554.8 a	1511.0 a
	Clarity (1/100 x)	0.005	lb ae/a	B								
20	Durango (1/200 x)	0.00374	lb ae/a	B	17.5 a	853.3 ab	33.0 a	33.5 a	2107.8 a	4.8 a	7724.0 a	1544.8 a
	Clarity (1/200 x)	0.0025	lb ae/a	B								

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: BROCCHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code								
Crop Code					BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
Part Rated					PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	HEAD -	HEAD -	HEAD -
Rating Data Type					HEAD DIAMV	WEIGHT	HEAD DIAMH	HEAD DIAMV	WEIGHT	TOTAL	TOTAL	AVERAGE
Rating Unit					CM	GRAMS	CM	CM	GRAMS	NUMBER	GRAMS	GRAMS
Rating Date					9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011
Trt-Eval Interval					HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1			- 1
					49	51	52	53	55	56	57	58
21	Clarity (1/400 x)	0.00125	lb ae/a	B	28.3 a	1867.5 a	23.3 a	21.3 a	1036.5 ab	5.0 a	7250.0 a	1450.0 a
	Durango (1/400 x)	0.00187	lb ae/a	B								
LSD (P=.05)					9.22	777.97	11.56	10.35	1103.05	0.27	2531.89	506.38
Standard Deviation					6.52	550.10	8.17	7.32	779.97	0.19	1790.32	358.06
CV					28.67	43.25	28.26	27.15	44.01	4.06	24.08	24.08
Bartlett's X2					31.143	30.006	22.183	31.822	13.368	0.0	17.044	17.044
P(Bartlett's X2)					0.039*	0.052	0.275	0.033*	0.819	.	0.587	0.587
Replicate F					1.103	2.609	4.810	7.531	9.326	0.323	14.563	14.563
Replicate Prob(F)					0.3552	0.0597	0.0046	0.0002	0.0001	0.8090	0.0001	0.0001
Treatment F					4.193	2.698	4.310	4.236	2.837	127.968	5.177	5.177
Treatment Prob(F)					0.0001	0.0016	0.0001	0.0001	0.0010	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

BROCOLLI- EFFECT OF SIMULATED 2,4-D AND DICAMBA DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	BROCCHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Crop Code
BRSOK = BROCCOLI / BRASSICA OLERACEA L. VAR. BOTRYTIS SUBVAR. CYMOSA LAM.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
LEAF = LEAF / FOLIAGE
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID:	CAULWCCTPENDIF 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Fremont, Ohio	Investigator:	Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Res. Assoc.
Affiliation: OARDC/The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Fremont
State/Prov.: OH
Postal Code: 43420
Country: USA
Trial Status: MULTI-YEAR/FINAL
Trial Reliability: Reliable
Initiation Date: 6/15/2011
Planned Completion Date: 7/13/2011

COOPERATOR/LANDOWNER

Cooperator: Matt Hofelich, Manager
Org: OARDC/ North Central ARS
Address 1: 1165 CR 43
City: Fremont
State/Prov: OH
Postal Code: 43420
Country: USA
Phone No: (419)-332-5142
Fax No: (419)-332-5643

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: IR-4 has received a request for the minor use of pendimethalin on cauliflower, broccoli, Brussel Sprout, cabbage, (NAPA) and Chinese cabbage (Bok Choy) for control of weeds. The purpose of this research is to collect crop safety data to support pesticide registration according to parameters outlined in the request.
Conclusions: There was no significant injury noted with pendimethalin. Significant stunt was observed with Dual Magnum. At 7DAT, Dual Magnum at (0.66pt/A) had 15% stunt; with the high rate (1.32 pt/A) 55% chlorosis and 50% stunt. The high rate of Duyal Magnum continued to show stunt with 37% at 14DAT, and 27% at 28 DAT.
Weed pressuire was low in general; the main species being annual grass, smooth pigweed, and common purslane. All treatments at 14DAT performed well; the Dual Magnum treatments had the best overall weed control , while the pendimethalin treatments were significantly lower in grass and smooth pigweed control.
Yield was not taken due to lack of head formation with the crop, possibly due to excessive heat and rainfall at the Branch this summer.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AGRASS	**an**	nual grass	various
2.	AMACH	**Sm**	ooth pigweed	Amaranthus hybridus
3.	POROL	**Co**	mmon purslane	Portulaca oleracea

Crop 1: BRSOB CAULIFLOWER **Variety:** 696R (Rispens Seed)
Planting Date: 6/13/2011 **Planting Method:** TRANSPLANTED - MACHINE
Rate: 1 P/ROW-FT **Depth:** 0.25 IN
Row Spacing: 5 FT **Spacing Within Row:** 12 IN **Seed Bed:** SMOOTH
Soil Temperature: 65.9 F **Soil Moisture:** NORMAL

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RACOBL

MAINTENANCE

Field Prep./Maintenance: 2011 Log of Operations for Doohan Cauliflower Herbicide Trial
Date Field ID Description of Operation

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID:	CAULWCCTPENDIF 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Fremont, Ohio	Investigator:	Dr. Douglas J. Doohan

10/1/2010		The Andersons applied 150 lbs / acre 10-52-0, 300 lbs / acre 0-0-60 and 7 lbs / acre of 14.3% Granular boron
10/8/2010	HW	Disk Chiseled with JD 7210
10/19/2010	HW	worked field with Landoll finishall
10/21/2010	HW	Fall disked bedded in preperation of trial
4/11/2011	HW	5- 200 cell flats 696R lot # 54758
4/28/2011	HW	fertilized with 200 ppm 13-2-13 & .5ml/2galwater dye
4/29/2011	HW	fertilized with 200 ppm 13-2-13 & .5ml/2galwater dye
5/2/2011	HW	thinned and pricked plants
5/3/2011	HW	fertilized with 200 ppm 13-2-13
5/5/2011	HW	fertilized with 200 ppm 13-2-13
5/6/2011	HW	fertilized with 200 ppm 13-2-13
5/10/2011	HW	fertilized with 200 ppm 20-20-20
5/13/2011	HW	power bedded plot area with JD 7210 and 3 row Fergeson bedder
5/13/2011	HW	laid out, staked and drove plot area
5/13/2011	HW	fertilized with 100 ppm 13-2-13
5/23/2011	HW	fertilized with 200 ppm 20-20-20
5/26/2011	HW	fertilized with 200 ppm 13-2-13
5/31/2011	HW	flaged project edges
6/2/2011	HW	Applied 28@ 28gpa,Roundup powermax @22 oz/A
6/7/2011	HW	re-power bedded plot area
6/7/2011	HW	cultipacked with JD 5085 & packer
6/10/2011	HW	trial received .8 inches of rainfall
6/13/2011	HW	laid out staked and drove plot area
6/13/2011	HW	transplanted trial into field used .7 qts of 10-34-0 / 50 gal H2O
6/13/2011	HW	set out plot stakes
6/17/2011	HW	trial received .25 inches of rainfall
6/19/2011	HW	trial received 1.2 inches of rainfall
6/20/2011	HW	trial received .2 inches of rainfall
6/21/2011	HW	trial received 1.0 inches of rainfall
6/22/2011	HW	trial received .4 inches of rainfall
6/29/2011	HW	deep ripped between beds
7/1/2011	HW	hoed and hand weeded all treatment #1 plots (weed free control)
7/1/2011	HW	applied 1.5 lbs/A Kocide 2000, 1.5 lbs/Amanzate pro-stick and 3 oz/A warrior
7/7/2011	HW	applied 1.5 lbs/A Kocide 2000 and 1.5 lbs/Amanzate pro-stick
7/8/2011	HW	trial received .4 inches of rainfall
7/11/2011	HW	trial received .8 inches of rainfall
7/14/2011	HW	cultivated, hoed and weeded cleaned up all plots
7/15/2011	HW	applied Manzate Prostick@1.75 lbs/A,Kocide 2000 @ 1.5 lbs/A, Asana@7 oz/A
7/18/2011	HW	trial received .6 inches of rainfall
7/21/2011	HW	Applied Manzate Prostick@ 1.75lbs/A, Kocide2000 @1.5 lbs/Aand Dipel @ 1lb/A
7/22/2011	HW	trial received 2.75 inches of rainfall
7/23/2011	HW	trial received .25 inches of rainfall
7/28/2011	HW	trial received .6 inches of rainfall
7/29/2011	HW	trial received .2 inches of rainfall
8/1/2011	HW	hoed and weeded cleaned up all plots
8/1/2011	HW	trial received .5 inches of rainfall
8/3/2011	HW	trial received .3 inches of rainfall
8/4/2011	HW	applied Bravo@2pt/A and Sevin @ 32oz/A
8/6/2011	HW	trial received 1 inch of rainfall
8/9/2011	HW	trial received .45 inches of rainfall
8/11/2011	HW	applied Quadris @ 15 oz/A and Coragen @ 5 oz/A
8/14/2011	HW	trial received .4 inches of rainfall
8/17/2011	HW	applied Bravo weatherstick@ 1.5pt/A,Ranman @ 2.75oz/A, Kocide 2000@1.5lbs/A and Mustang max@4 oz/A
8/23/2011	HW	applied Quadris @ 12 oz/A and Coragen @3.5 oz/A
8/24/2011	HW	trial received 1 inch of rainfall
8/25/2011	HW	trial received .7 inches of rainfall
8/31/2011	HW	applied bravo@2pt/A
8/31/2011		applied Dimethoate@2/3 pt/A and Thionex@1.33 qt/A
9/1/2011	HW	trial received .2 inches of rainfall

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID:	CAULWCCTPENDIF 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Fremont, Ohio	Investigator:	Dr. Douglas J. Doohan

9/3/2011	HW	trial received .55 inches of rainfall
9/7/2011	HW	trial received 1.7 inches of rainfall
9/8/2011	HW	trial received 2.5 inches of rainfall
9/26/2011	HW	Based on like of lack of head development harvest of trial was abandoned

SOIL DESCRIPTION

% Sand: 70	**% OM:** 2.3	**Texture:**	FINE SANDY LOAM
% Silt: 20	**pH:** 6.7	**Soil Name:**	Kibbie Fine Sandy Loam
% Clay: 10	**CEC:** 12.2	**Fert. Level:**	GOOD

Overall Moisture Conditions: NORMAL
Closest Weather Station: OARDC **Distance:** 300 **Unit:** YD

APPLICATION DESCRIPTION

	A
Application Date:	6/15/2011
Time of Day:	11 AM
Application Method:	SPRAY
Application Timing:	POSTTR
Applic. Placement:	BRODIR
Air Temp., Unit:	78 F
% Relative Humidity:	54.4
Wind Velocity, Unit:	5 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	66.5 F
Soil Moisture:	ADEQUATE
% Cloud Cover:	50

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	BRSOB POST
Stage Scale:	transplan
Height, Unit:	3.5 IN

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
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Location:	Fremont, Ohio	Investigator:	Dr. Douglas J. Doohan

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRAS POST
Stage Scale:	NONE
Density, Unit:	NONE NONE
Weed 2 Code, Stage:	AMACH POST
Stage Scale:	NONE
Density, Unit:	NONE NONE
Weed 3 Code, Stage:	POROL POST
Stage Scale:	NONE
Density, Unit:	NONE NONE

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	turbotwin
Nozzle Size:	TTJ60-110
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	H2O
Spray Volume, Unit:	25 GPA
Propellant:	CO2

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID: CAULWCCTPENDIF 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	PENDIMETHALIN 1X	3.8	L	0.95	lb ai/a	2-4 LF	B	20.0 ml/mx	102	203	305	401
3	PENDIMETHALIN 2X	3.8	L	1.9	lb ai/a	2-4 LF	B	40.0 ml/mx	103	201	303	402
4	DUAL MAGNUM	7.62	L	0.63	lb ai/a	2-4 LF	B	6.613 ml/mx	104	202	301	405
5	DUAL MAGNUM	7.62	L	1.26	lb ai/a	2-4 LF	B	13.23 ml/mx	105	204	302	404

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID: CAULWCCTPENDIF 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	WEED FREE CONTROL								101	205	304	403

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
24.997	ml	PENDIMETHALIN 1X	3.8	L	
49.995	ml	PENDIMETHALIN 2X	3.8	L	
24.800	ml	DUAL MAGNUM	7.62	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID: CAULWCCTPENDIF 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk										
4	4	401	2	402	3	403	1	404	5	405	4
3	3	301	4	302	5	303	3	304	1	305	2
2	2	201	3	202	4	203	2	204	5	205	1
1	1	101	1	102	2	103	3	104	4	105	5

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CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID: CAULWCCTPENDIF 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					BRSOB	BRSOB	AGRASS BRSOB	AMACH BRSOB	POROL BRSOB	BRSOB	BRSOB	AGRASS BRSOB	AMACH BRSOB	POROL BRSOB	BRSOB
	Crop Code															
	Part Rated					PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -
	Rating Data Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CHLOROSIS
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	7/13/2011
	Trt-Eval Interval					7DAT	7DAT	7DAT	7DAT	7DAT	14DAT	14DAT	14DAT	14DAT	14DAT	28DAT
1	WEED FREE CONTROL				101	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
					205	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
					304	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
					403	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
					Mean =	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
2	PENDIMETHALIN 1X	0.95	lb ai/a	B	102	0.0	0.0	90.0	0.0	0.0	0.0	0.0	80.0	85.0	99.0	0.0
					203	0.0	0.0	95.0	99.0	99.0	0.0	0.0	65.0	90.0	99.0	0.0
					305	0.0	0.0	90.0	99.0	99.0	0.0	5.0	85.0	85.0	99.0	0.0
					401	0.0	0.0	90.0	99.0	99.0	0.0	5.0	80.0	80.0	99.0	0.0
					Mean =	0.0	0.0	91.3	74.3	74.3	0.0	2.5	77.5	85.0	99.0	0.0
3	PENDIMETHALIN 2X	1.9	lb ai/a	B	103	10.0	0.0	90.0	99.0	99.0	0.0	5.0	80.0	95.0	99.0	0.0
					201	10.0	10.0	90.0	99.0	99.0	0.0	0.0	90.0	99.0	99.0	0.0
					303	0.0	0.0	90.0	99.0	99.0	0.0	5.0	90.0	99.0	99.0	0.0
					402	0.0	0.0	95.0	99.0	0.0	0.0	5.0	95.0	95.0	99.0	0.0
					Mean =	5.0	2.5	91.3	99.0	74.3	0.0	3.8	88.8	97.0	99.0	0.0
4	DUAL MAGNUM	0.63	lb ai/a	B	104	0.0	10.0	90.0	99.0	99.0	0.0	0.0	99.0	99.0	99.0	0.0
					202	0.0	15.0	95.0	99.0	99.0	0.0	5.0	100.0	99.0	99.0	0.0
					301	0.0	5.0	90.0	90.0	99.0	0.0	0.0	99.0	99.0	99.0	0.0
					405	30.0	30.0	99.0	99.0	99.0	0.0	15.0	99.0	99.0	100.0	0.0
					Mean =	7.5	15.0	93.5	96.8	99.0	0.0	5.0	99.3	99.0	99.3	0.0
5	DUAL MAGNUM	1.26	lb ai/a	B	105	50.0	50.0	99.0	99.0	99.0	0.0	40.0	99.0	95.0	95.0	0.0
					204	65.0	60.0	99.0	99.0	99.0	0.0	35.0	100.0	99.0	99.0	0.0
					302	65.0	50.0	99.0	99.0	99.0	0.0	40.0	99.0	95.0	99.0	0.0
					404	40.0	40.0	99.0	99.0	0.0	0.0	30.0	99.0	99.0	90.0	0.0
					Mean =	55.0	50.0	99.0	99.0	74.3	0.0	36.3	99.3	97.0	95.8	0.0

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID: CAULWCCTPENDIF 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	BRSOB PLANT - STUNT % 7/13/2011 28DAT	AGRASS BRSOB WEED - CONTROL % 7/13/2011 28DAT	AMACH BRSOB WEED - CONTROL % 7/13/2011 28DAT	POROL BRSOB WEED - CONTROL % 7/13/2011 28DAT
						12	13	14	15
1	WEED FREE CONTROL				101	0.0	100.0	100.0	100.0
					205	0.0	100.0	100.0	100.0
					304	0.0	100.0	100.0	100.0
					403	0.0	100.0	100.0	100.0
					Mean =	0.0	100.0	100.0	100.0
2	PENDIMETHALIN 1X	0.95	lb ai/a	B	102	0.0	0.0	99.0	0.0
					203	0.0	0.0	99.0	0.0
					305	0.0	60.0	99.0	0.0
					401	0.0	0.0	99.0	0.0
					Mean =	0.0	15.0	99.0	0.0
3	PENDIMETHALIN 2X	1.9	lb ai/a	B	103	0.0	75.0	99.0	0.0
					201	0.0	70.0	0.0	0.0
					303	10.0	75.0	99.0	0.0
					402	10.0	75.0	99.0	99.0
					Mean =	5.0	73.8	74.3	24.8
4	DUAL MAGNUM	0.63	lb ai/a	B	104	0.0	95.0	99.0	0.0
					202	0.0	95.0	99.0	99.0
					301	0.0	95.0	99.0	99.0
					405	0.0	80.0	0.0	0.0
					Mean =	0.0	91.3	74.3	49.5
5	DUAL MAGNUM	1.26	lb ai/a	B	105	25.0	85.0	99.0	99.0
					204	35.0	80.0	99.0	0.0
					302	20.0	85.0	0.0	0.0
					404	25.0	80.0	99.0	0.0
					Mean =	26.3	82.5	74.3	24.8

The Ohio State University

CAULIFLOWER - PENDIMETHALIN NATURE OF PERFORMANCE ON BRASSICA HEAD AND STEM
IR-4 (P6504)

Trial ID:	CAULWCCTPENDIF 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Fremont, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
AMACH = Amaranthus hybridus
POROL = Portulaca oleracea
Crop Code
BRSOB = CAULIFLOWER / BRASSICA OLERACEA L. VAR. BOTRYTIS SUBVAR. CULTIFLORA DC.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT

The Ohio State University

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Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				BRSOB	BRSOB	AGRASS BRSOB	AMACH BRSOB	POROL BRSOB	BRSOB	BRSOB	AGRASS BRSOB	AMACH BRSOB	POROL BRSOB	BRSOB
	Crop Code														
	Part Rated				PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -
	Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CHLOROSIS
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	7/13/2011
	Trt-Eval Interval				7DAT	7DAT	7DAT	7DAT	7DAT	14DAT	14DAT	14DAT	14DAT	14DAT	28DAT
1	WEED FREE CONTROL				0.0 b	0.0 c	100.0 a	100.0 a	100.0 a	0.0 a	0.0 b	100.0 a	100.0 a	100.0 a	0.0 a
2	PENDIMETHALIN 1X	0.95	lb ai/a	B	0.0 b	0.0 c	91.3 b	74.3 a	74.3 a	0.0 a	2.5 b	77.5 c	85.0 b	99.0 a	0.0 a
3	PENDIMETHALIN 2X	1.9	lb ai/a	B	5.0 b	2.5 c	91.3 b	99.0 a	74.3 a	0.0 a	3.8 b	88.8 b	97.0 a	99.0 a	0.0 a
4	DUAL MAGNUM	0.63	lb ai/a	B	7.5 b	15.0 b	93.5 b	96.8 a	99.0 a	0.0 a	5.0 b	99.3 a	99.0 a	99.3 a	0.0 a
5	DUAL MAGNUM	1.26	lb ai/a	B	55.0 a	50.0 a	99.0 a	99.0 a	74.3 a	0.0 a	36.3 a	99.3 a	97.0 a	95.8 a	0.0 a
	LSD (P=.05)				15.41	10.14	3.56	34.51	57.41	0.00	6.85	7.57	3.38	3.04	0.00
	Standard Deviation				10.00	6.58	2.31	22.39	37.26	0.00	4.45	4.92	2.19	1.97	0.00
	CV				74.07	48.76	2.43	23.88	44.18	0.0	46.83	5.29	2.29	2.0	0.0
	Bartlett's X2				2.286	1.54	1.259	9.946	0.0	0.0	3.724	22.747	1.323	8.51	0.0
	P(Bartlett's X2)				0.319	0.463	0.533	0.002*	.	.	0.293	0.001*	0.516	0.004*	.
	Replicate F				0.083	0.808	1.897	0.926	1.294	0.000	0.421	0.764	1.694	0.754	0.000
	Replicate Prob(F)				0.9678	0.5136	0.1840	0.4579	0.3213	1.0000	0.7413	0.5359	0.2210	0.5411	1.0000
	Treatment F				21.950	42.000	13.362	0.964	0.551	0.000	45.884	15.954	30.667	2.782	0.000
	Treatment Prob(F)				0.0001	0.0001	0.0002	0.4621	0.7019	1.0000	0.0001	0.0001	0.0001	0.0759	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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IR-4 (P6504)

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Location: Fremont, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	BRSOB PLANT - STUNT	AGRASS BRSOB WEED - CONTROL	AMACH BRSOB WEED - CONTROL	POROL BRSOB WEED - CONTROL
	Weed Code					AGRASS	AMACH	POROL
	Crop Code				BRSOB	BRSOB	BRSOB	BRSOB
	Part Rated				PLANT -	WEED -	WEED -	WEED -
	Rating Data Type				STUNT	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%
	Rating Date				7/13/2011	7/13/2011	7/13/2011	7/13/2011
	Trt-Eval Interval				28DAT	28DAT	28DAT	28DAT
					12	13	14	15
1	WEED FREE CONTROL				0.0 b	100.0 a	100.0 a	100.0 a
2	PENDIMETHALIN 1X	0.95	lb ai/a	B	0.0 b	15.0 b	99.0 a	0.0 a
3	PENDIMETHALIN 2X	1.9	lb ai/a	B	5.0 b	73.8 a	74.3 a	24.8 a
4	DUAL MAGNUM	0.63	lb ai/a	B	0.0 b	91.3 a	74.3 a	49.5 a
5	DUAL MAGNUM	1.26	lb ai/a	B	26.3 a	82.5 a	74.3 a	24.8 a
	LSD (P=.05)				6.37	20.56	63.81	69.62
	Standard Deviation				4.13	13.35	41.41	45.19
	CV				66.13	18.41	49.1	113.54
	Bartlett's X2				0.021	19.89	0.0	0.08
	P(Bartlett's X2)				0.884	0.001*	.	0.961
	Replicate F				0.268	1.450	0.286	0.000
	Replicate Prob(F)				0.8470	0.2772	0.8348	1.0000
	Treatment F				30.366	25.351	0.446	2.819
	Treatment Prob(F)				0.0001	0.0001	0.7732	0.0734

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Investigator: Dr. Douglas J. Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: M multi-year/interim **Trial Reliability:** Reliable
Initiation Date: 6/30/2011 **Planned Completion Date:** 10/31/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
T**he objectives are twofold:**

1) Efficacy of 2 aminocyclopyr products at 2 rates each

2) Crop safety of aminocyclopyr products

Crop Injury and weed control were assessed visually. The 0-100 linear scale was used , in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

The "crop" is **pasture grasses**, (roughstalk bluegrass). The "target weed " is **giant ragweed.**

* **OARDC Weather data is included from 4/1 to 8/31/11**

Conclusions:

CONCLUSION:

Treatment #5, RDQ 98 at 2.50 oz/A + NIS was the best overall treatment; weak on yellow nutsedge (but the yellow nutsedge pressure was low overall)

All sprayed treatments in general had effective weed control of all listed weed species at 90 days after application (90DAT)

The pasture grass species, (roughstalk bluegrass appeared to be injury free), although it did go dormant in the summer and seemed to be actively regrowing at the 90 DAT rating in late September.

Treatments #3 and #5 had a significantly higher percentage of giant foxtail stand thinning over the lower rate treatments #2 and #4.

The trial will be rated again one year later on 6/30 /2012.

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Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Affiliation: OARDC/The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Dr. Douglas J. Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

Cooperator/Landowner

Cooperator: Bob Napier **Role:** Farm Manager
Organization: OARDC **Org. Type:** Research
Address 1: 1680 Madison Ave
Phone No.: 330-264-7008
City: Wooster
State/Prov: OH **Mobile No.:** 330-466-2292
Postal Code: 44691
Country: USA United States

Crop Description

Crop 1: YNIGF Grassland not used in agric. Grassland not used in agric.
Seed Bed: COMPAC compacted

The Ohio State University

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Sponsor Contact: Marsha Martin

Pest Description

Pest 1 Type: W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 3 Type: W **Code:** ASTPI Symphyotrichum pilosum
Common Name: White heath aster

Pest 4 Type: W **Code:** PLAMA Plantago major
Common Name: Broadleaf plantain

Pest 5 Type: W **Code:** POATR Poa trivialis
Common Name: Rough-stalk bluegrass

Pest 6 Type: W **Code:** POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed

Pest 7 Type: W **Code:** RUMCR Rumex crispus
Common Name: Curly dock

Pest 8 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 9 Type: W **Code:** TRFRE Trifolium repens
Common Name: White clover

Site and Design

Plot Width, Unit: 5 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 125 FT2
Replications: 3
% Slope: 0.0
Site Type: FIELD field
PLOT plot
Tillage Type: MINTIL minimum-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Trial Initiation Comments:
Field was lightly diced to insure maximum giant ragweed germination.

Field Prep./Maintenance:
None other than initial light discing to insure maximum giant ragweed germination,.

Soil Description

% Sand: 11 **% OM:** 2.5 **Texture:** SIL silt loam
% Silt: 75 **pH:** 6.0 **Soil Name:** Wooster Silt Loam
% Clay: 14 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

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Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 4 MI

Application Description

	A
Application Date:	6/30/2011
Time of Day:	10:50 AM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROADCAST
Applied By:	TIM KOCH
Air Temperature, Unit:	72.9 F
% Relative Humidity:	71.9
Wind Velocity, Unit:	1.5 MPH
Wind Direction:	W
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	69 F
Soil Moisture:	DRY
% Cloud Cover:	40

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	YNIGF
Height, Unit:	18 IN
Height Minimum, Maximum:	10

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Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBEL W
Height, Unit:	11.5 IN
Height Minimum, Maximum:	9 16
Pest 2 Code, Type, Scale:	AMBTR W
Height, Unit:	12 IN
Height Minimum, Maximum:	10 16
Pest 3 Code, Type, Scale:	ASTPI W
Height, Unit:	22 IN
Pest 4 Code, Type, Scale:	PLAMA W
Height, Unit:	3 IN
Pest 5 Code, Type, Scale:	POATR W
Height, Unit:	16.5 IN
Height Minimum, Maximum:	15 18
Pest 6 Code, Type, Scale:	POLPY W
Height, Unit:	6 IN
Pest 7 Code, Type, Scale:	RUMCR W
Height, Unit:	27.5 IN
Height Minimum, Maximum:	20 33
Pest 8 Code, Type, Scale:	SETFA W
Height, Unit:	12.5 IN
Height Minimum, Maximum:	10 15
Pest 9 Code, Type, Scale:	TRFRE W

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Trial ID: GTRAGWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Application Equipment

	A
Appl. Equipment:	SPRAYER
Equipment Type:	BACKPK
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TURBOTWIN
Nozzle Size:	11002VP
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	WATER
Spray Volume, Unit:	25 gal/ac
Mix Size, Unit:	2 liters
Propellant:	CO2

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Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: A Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .97764)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
2	MAT 28+	2.0	LB/GAL	SL	0.625	oz ai/a	POST	A	1.562 ml/mx	102	204	305
	2, 4-D AMINE+	3.80		SL	4.75	oz ai/a	POST	A	6.249 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
3	MAT 28+	2.0	LB/GAL	SL	1.0	oz ai/a	POST	A	2.5 ml/mx	103	205	303
	2, 4-D AMINE+	3.80		SL	7.60	oz ai/a	POST	A	9.999 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
4	RDQ98+	51		WG	0.048	lb ai/a	POST	A	0.9022 g/mx	104	201	302
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
5	RDQ98+	51		WG	0.08	lb ai/a	POST	A	1.504 g/mx	105	203	304
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
6	CROSSBOW	3		L	0.75	lb ai/a	POST	A	20.0 ml/mx	106	206	306

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Reps: 3 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .97764)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
1	UNTREATED CONTROL									101	202	301

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
5.078	ml	MAT 28+	2.0	SL	
20.310	ml	2, 4-D AMINE+	3.80	SL	
24.997	ml	NIS	1.00	SL	
3.007	g	RDQ98+	51	WG	
24.997	ml	CROSSBOW	3	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

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Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
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Rep	Blk												
	4												
3	3	301	1	302	4	303	3	304	5	305	2	306	6
2	2	201	4	202	1	203	5	204	2	205	3	206	6
1	1	101	1	102	2	103	3	104	4	105	5	106	6

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Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code							ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR	POLPY	DAUCA
Pest Scientific Name							Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>	Persicaria pen>	Daucus carota
Pest Name							WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed	PA smartwd	Wild carrot
Crop Code							YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name							Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name							Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated							WEED -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date							7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
Rating Type							CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit							%	%	%	%	%	%	%	%
Number of Subsamples							0	0	0	0	0	0	0	0
Days After First/Last Applic.							24 24	24 24	24 24	24 24	24 24	24 24	24 24	24 24
Trt-Eval Interval							30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
Number of Decimals							0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0
					202	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0
2	MAT 28+	0.625	oz ai/a	A	102	60	0	85	0	99	99	99	70
	2, 4-D AMINE+	4.75	oz ai/a	A	204	10	0	99	0	90	99	85	99
	NIS	0.25	% v/v	A	305	0	0	99	50	90	90	90	99
					Mean =	23	0	94	17	93	96	91	89
3	MAT 28+	1.0	oz ai/a	A	103	80	0	99	40	99	99	99	90
	2, 4-D AMINE+	7.60	oz ai/a	A	205	99	0	99	30	99	99	90	99
	NIS	0.25	% v/v	A	303	95	0	99	50	99	99	99	99
					Mean =	91	0	99	40	99	99	96	96
4	RDQ98+	0.048	lb ai/a	A	104	85	0	99	0	85	99	90	99
	NIS	0.25	% v/v	A	201	85	0	99	40	80	99	85	99
					302	95	0	99	30	80	99	99	99
					Mean =	88	0	99	23	82	99	91	99
5	RDQ98+	0.08	lb ai/a	A	105	85	0	99	50	90	99	99	99
	NIS	0.25	% v/v	A	203	85	0	99	60	95	99	90	99
					304	99	0	99	80	99	99	99	99
					Mean =	90	0	99	63	95	99	96	99
6	CROSSBOW	0.75	lb ai/a	A	106	50	0	99	0	85	90	85	50
					206	40	0	99	0	85	90	99	95
					306	50	0	99	0	85	99	99	99
					Mean =	47	0	99	0	85	93	94	81

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GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code						CYPES	ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR	POLPY
Pest Scientific Name						Cyperus escule>	Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>	Persicaria pen>
Pest Name						YNsedge	WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed	PA smartwd
Crop Code						YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name						Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name						Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated						WEED -	WEED -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date						7/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
Rating Type						CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%	%	%
Number of Subsamples						0	0	0	0	0	0	0	0
Days After First/Last Applic.						24 24	55 55	55 55	55 55	55 55	55 55	55 55	55 55
Trt-Eval Interval						30DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
Number of Decimals						0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	9	10	11	12	13	14	15	16
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0
					202	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0
2	MAT 28+	0.625	oz ai/a	A	102	99	0	0	99	0	99	99	99
	2, 4-D AMINE+	4.75	oz ai/a	A	204	99	99	0	99	0	99	99	99
	NIS	0.25	% v/v	A	305	99	30	0	99	0	99	85	99
					Mean =	99	43	0	99	0	99	94	99
3	MAT 28+	1.0	oz ai/a	A	103	99	30	0	99	0	99	99	99
	2, 4-D AMINE+	7.60	oz ai/a	A	205	99	99	0	99	15	99	99	99
	NIS	0.25	% v/v	A	303	99	99	0	99	10	99	99	99
					Mean =	99	76	0	99	8	99	99	99
4	RDQ98+	0.048	lb ai/a	A	104	99	99	0	99	30	85	99	99
	NIS	0.25	% v/v	A	201	99	15	0	99	0	85	99	99
					302	90	99	0	99	0	80	99	99
					Mean =	96	71	0	99	10	83	99	99
5	RDQ98+	0.08	lb ai/a	A	105	0	85	0	99	30	95	99	99
	NIS	0.25	% v/v	A	203	0	99	0	99	45	80	99	99
					304	0	95	0	99	60	99	99	99
					Mean =	0	93	0	99	45	91	99	99
6	CROSSBOW	0.75	lb ai/a	A	106	99	10	0	99	0	99	99	95
					206	99	99	0	99	0	99	99	90
					306	99	99	0	99	0	99	99	99
					Mean =	99	69	0	99	0	99	99	95

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code							DAUCA	CYPES	ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR
Pest Scientific Name							Daucus carota	Cyperus escule>	Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>
Pest Name							Wild carrot	YNsedge	WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed
Crop Code							YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name							Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name							Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated							WEED -	WEED -	WEED -	CROP -	WEED -	WEED -	WEED -	WEED -
Rating Date							8/24/2011	8/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011
Rating Type							CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit							%	%	%	%	%	%	%	%
Number of Subsamples							0	0	0	0	0	0	0	0
Days After First/Last Applic.							55 55	55 55	86 86	86 86	86 86	86 86	86 86	86 86
Trt-Eval Interval							60DAT	60DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
Number of Decimals							0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	17	18	19	20	21	22	23	24
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0
					202	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0
2	MAT 28+	0.625	oz ai/a	A	102	99	99	80	0	99	0	99	99
	2, 4-D AMINE+	4.75	oz ai/a	A	204	99	99	95	0	99	20	99	99
	NIS	0.25	% v/v	A	305	99	99	95	0	99	25	99	99
					Mean =	99	99	90	0	99	15	99	99
3	MAT 28+	1.0	oz ai/a	A	103	99	99	90	0	99	30	99	99
	2, 4-D AMINE+	7.60	oz ai/a	A	205	99	99	99	0	99	0	99	99
	NIS	0.25	% v/v	A	303	99	99	99	0	99	30	99	99
					Mean =	99	99	96	0	99	20	99	99
4	RDQ98+	0.048	lb ai/a	A	104	99	99	99	0	99	30	99	99
	NIS	0.25	% v/v	A	201	99	99	75	0	99	20	95	99
					302	99	90	99	0	99	0	90	99
					Mean =	99	96	91	0	99	17	95	99
5	RDQ98+	0.08	lb ai/a	A	105	99	0	99	0	99	30	99	99
	NIS	0.25	% v/v	A	203	99	0	99	0	99	40	99	99
					304	99	0	99	0	99	50	99	99
					Mean =	99	0	99	0	99	40	99	99
6	CROSSBOW	0.75	lb ai/a	A	106	99	99	95	0	99	0	99	99
					206	99	99	99	0	99	0	99	99
					306	99	99	99	0	99	0	99	99
					Mean =	99	99	98	0	99	0	99	99

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	W Weed POLPY Persicaria pen> PA smartwd YNKKX Non-crop land Non-crop land WEED - 9/24/2011 CONTROL % 0 86 86 90DAT 0	W Weed DAUCA Daucus carota Wild carrot YNKKX Non-crop land Non-crop land WEED - 9/24/2011 CONTROL % 0 86 86 90DAT 0	W Weed CYPES Cyperus escule> YNsedge YNKKX Non-crop land Non-crop land WEED - 9/24/2011 CONTROL % 0 86 86 90DAT 0
	Pest Type					W Weed	W Weed	W Weed
	Pest Code					POLPY	DAUCA	CYPES
	Pest Scientific Name					Persicaria pen>	Daucus carota	Cyperus escule>
	Pest Name					PA smartwd	Wild carrot	YNsedge
	Crop Code					YNKKX	YNKKX	YNKKX
	Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land
	Crop Name					Non-crop land	Non-crop land	Non-crop land
	Part Rated					WEED -	WEED -	WEED -
	Rating Date					9/24/2011	9/24/2011	9/24/2011
	Rating Type					CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%
	Number of Subsamples					0	0	0
	Days After First/Last Applic.					86 86	86 86	86 86
	Trt-Eval Interval					90DAT	90DAT	90DAT
	Number of Decimals					0	0	0
1	UNTREATED CONTROL				101	0	0	0
					202	0	0	0
					301	0	0	0
					Mean =	0	0	0
2	MAT 28+	0.625	oz ai/a	A	102	99	95	99
	2, 4-D AMINE+	4.75	oz ai/a	A	204	99	99	99
	NIS	0.25	% v/v	A	305	99	99	99
					Mean =	99	98	99
3	MAT 28+	1.0	oz ai/a	A	103	99	99	99
	2, 4-D AMINE+	7.60	oz ai/a	A	205	99	99	99
	NIS	0.25	% v/v	A	303	99	99	99
					Mean =	99	99	99
4	RDQ98+	0.048	lb ai/a	A	104	99	99	99
	NIS	0.25	% v/v	A	201	99	99	99
					302	99	95	99
					Mean =	99	98	99
5	RDQ98+	0.08	lb ai/a	A	105	99	99	0
	NIS	0.25	% v/v	A	203	99	99	0
					304	99	99	0
					Mean =	99	99	0
6	CROSSBOW	0.75	lb ai/a	A	106	99	99	99
					206	99	99	99
					306	99	99	99
					Mean =	99	99	99

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GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ASTPI, Symphyotrichum pilosum, = US
POATR, Poa trivialis, = US
RUMCR, Rumex crispus, = US
SETFA, Setaria faberi, = US
AMBEL, Ambrosia artemisiifolia, = US
AMBTR, Ambrosia trifida, = US
POLPY, Persicaria pensylvanica, = US
DAUCA, Daucus carota, = US
CYPES, Cyperus esculentus, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7	8
Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code					ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR	POLPY	DAUCA
Pest Scientific Name					Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>	Persicaria pen>	Daucus carota
Pest Name					WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed	PA smartwd	Wild carrot
Crop Code					YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated					WEED -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date					7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
Rating Type					CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%
Number of Subsamples					0	0	0	0	0	0	0	0
Days After First/Last Applic.					24 24	24 24	24 24	24 24	24 24	24 24	24 24	24 24
Trt-Eval Interval					30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
Number of Decimals					0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 c	0 a	0 b	0 c	0 c	0 b	0 b	0 b
2	MAT 28+	0.625	oz ai/a	A	23 bc	0 a	94 a	17 bc	93 a	96 a	91 a	89 a
	2, 4-D AMINE+	4.75	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	1.0	oz ai/a	A	91 a	0 a	99 a	40 ab	99 a	99 a	96 a	96 a
	2, 4-D AMINE+	7.60	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.048	lb ai/a	A	88 a	0 a	99 a	23 bc	82 b	99 a	91 a	99 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.08	lb ai/a	A	90 a	0 a	99 a	63 a	95 a	99 a	96 a	99 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	0.75	lb ai/a	A	47 b	0 a	99 a	0 c	85 b	93 a	94 a	81 a
LSD (P=.05)					28.1	0.0	6.0	25.4	5.9	6.0	10.3	20.7
Standard Deviation					15.5	0.0	3.3	14.0	3.2	3.3	5.7	11.4
CV					27.34	0.0	4.04	58.54	4.28	4.06	7.28	14.67
Bartlett's X2					8.696	0.0	0.0	2.013	0.622	0.0	0.551	3.777
P(Bartlett's X2)					0.069	.	.	0.57	0.733	.	0.968	0.151
Replicate F					0.293	0.000	1.000	3.182	0.324	0.000	1.797	3.114
Replicate Prob(F)					0.7522	1.0000	0.4019	0.0852	0.7305	1.0000	0.2154	0.0889
Treatment F					19.360	0.000	442.560	9.233	404.820	439.000	136.329	34.515
Treatment Prob(F)					0.0001	1.0000	0.0001	0.0017	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12	13	14	15	16
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				CYPES	ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR	POLPY
	Pest Scientific Name				Cyperus escule>	Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>	Persicaria pen>
	Pest Name				YNsedge	WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed	PA smartwd
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	WEED -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				7/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
	Rating Type				CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				24 24	55 55	55 55	55 55	55 55	55 55	55 55	55 55
	Trt-Eval Interval				30DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 a	0 b	0 b	0 c	0 b	0 b
2	MAT 28+	0.625	oz ai/a	A	99 a	43 a	0 a	99 a	0 b	99 a	94 a	99 a
	2, 4-D AMINE+	4.75	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	1.0	oz ai/a	A	99 a	76 a	0 a	99 a	8 b	99 a	99 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.048	lb ai/a	A	96 a	71 a	0 a	99 a	10 b	83 b	99 a	99 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.08	lb ai/a	A	0 b	93 a	0 a	99 a	45 a	91 ab	99 a	99 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	0.75	lb ai/a	A	99 a	69 a	0 a	99 a	0 b	99 a	99 a	95 a
	LSD (P=.05)				3.9	68.8	0.0	0.0	19.6	8.0	6.0	3.3
	Standard Deviation				2.1	37.8	0.0	0.0	10.7	4.4	3.3	1.8
	CV				3.24	64.37	0.0	0.0	101.84	5.6	4.04	2.25
	Bartlett's X2				0.0	4.897	0.0	0.0	1.163	2.422	0.0	0.0
	P(Bartlett's X2)				.	0.298	.	.	0.559	0.12	.	.
	Replicate F				1.000	1.444	0.000	0.000	0.048	0.605	1.000	1.000
	Replicate Prob(F)				0.4019	0.2812	1.0000	1.0000	0.9533	0.5651	0.4019	0.4019
	Treatment F				1717.000	2.281	0.000	0.000	7.923	235.526	442.560	1423.502
	Treatment Prob(F)				0.0001	0.1251	1.0000	1.0000	0.0030	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011 Protocol ID: # US 564/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type			W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code			DAUCA	CYPES	ASTPI	POATR	RUMCR	SETFA	AMBEL	AMBTR
Pest Scientific Name			Daucus carota	Cyperus escule>	Symphyotrichum>	Poa trivialis	Rumex crispus	Setaria faberi	Ambrosia artem>	Ambrosia trifi>
Pest Name			Wild carrot	YNsedge	WH aster	RS bluegrs	C dock	GTfoxtail	C ragweed	GT ragweed
Crop Code			YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name			Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name			Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated			WEED -	WEED -	WEED -	CROP -	WEED -	WEED -	WEED -	WEED -
Rating Date			8/24/2011	8/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011	9/24/2011
Rating Type			CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%	%	%
Number of Subsamples			0	0	0	0	0	0	0	0
Days After First/Last Applic.			55 55	55 55	86 86	86 86	86 86	86 86	86 86	86 86
Trt-Eval Interval			60DAT	60DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
Number of Decimals			0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	17	18	19	20	21	22	23	24
1	UNTREATED CONTROL				0 b	0 b	0 b	0 a	0 b	0 b	0 b	0 b
2	MAT 28+	0.625	oz ai/a	A	99 a	99 a	90 a	0 a	99 a	15 ab	99 a	99 a
	2, 4-D AMINE+	4.75	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	1.0	oz ai/a	A	99 a	99 a	96 a	0 a	99 a	20 ab	99 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.048	lb ai/a	A	99 a	96 a	91 a	0 a	99 a	17 ab	95 a	99 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.08	lb ai/a	A	99 a	0 b	99 a	0 a	99 a	40 a	99 a	99 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	0.75	lb ai/a	A	99 a	99 a	98 a	0 a	99 a	0 b	99 a	99 a
LSD (P=.05)					0.0	3.9	13.1	0.0	0.0	22.7	3.3	0.0
Standard Deviation					0.0	2.1	7.2	0.0	0.0	12.5	1.8	0.0
CV					0.0	3.24	9.15	0.0	0.0	81.85	2.25	0.0
Bartlett's X2					0.0	0.0	4.92	0.0	0.0	0.559	0.0	0.0
P(Bartlett's X2)					.	.	0.178	.	.	0.906	.	.
Replicate F					0.000	1.000	0.732	0.000	0.000	0.169	1.000	0.000
Replicate Prob(F)					1.0000	0.4019	0.5051	1.0000	1.0000	0.8471	0.4019	1.0000
Treatment F					0.000	1717.000	86.669	0.000	0.000	4.229	1423.502	0.000
Treatment Prob(F)					1.0000	0.0001	0.0001	1.0000	1.0000	0.0251	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	25	26	27
	Pest Type				W Weed	W Weed	W Weed
	Pest Code				POLPY	DAUCA	CYPES
	Pest Scientific Name				Persicaria pen>	Daucus carota	Cyperus escule>
	Pest Name				PA smartwd	Wild carrot	YNsedge
	Crop Code				YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	WEED -	WEED -
	Rating Date				9/24/2011	9/24/2011	9/24/2011
	Rating Type				CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%
	Number of Subsamples				0	0	0
	Days After First/Last Applic.				86 86	86 86	86 86
	Trt-Eval Interval				90DAT	90DAT	90DAT
	Number of Decimals				0	0	0
1	UNTREATED CONTROL				0 b	0 b	0 b
2	MAT 28+	0.625	oz ai/a	A	99 a	98 a	99 a
	2, 4-D AMINE+	4.75	oz ai/a	A			
	NIS	0.25	% v/v	A			
3	MAT 28+	1.0	oz ai/a	A	99 a	99 a	99 a
	2, 4-D AMINE+	7.60	oz ai/a	A			
	NIS	0.25	% v/v	A			
4	RDQ98+	0.048	lb ai/a	A	99 a	98 a	99 a
	NIS	0.25	% v/v	A			
5	RDQ98+	0.08	lb ai/a	A	99 a	99 a	0 b
	NIS	0.25	% v/v	A			
6	CROSSBOW	0.75	lb ai/a	A	99 a	99 a	99 a
	LSD (P=.05)				0.0	2.5	0.0
	Standard Deviation				0.0	1.4	0.0
	CV				0.0	1.7	0.0
	Bartlett's X2				0.0	0.0	0.0
	P(Bartlett's X2)				.	.	.
	Replicate F				0.000	0.455	0.000
	Replicate Prob(F)				1.0000	0.6472	1.0000
	Treatment F				0.000	2479.665	0.000
	Treatment Prob(F)				1.0000	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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GIANT RAGWEED - WEED CONTROL WITH MAT28

Trial ID: GTRAGWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 564/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ASTPI, Symphyotrichum pilosum, = US
POATR, Poa trivialis, = US
RUMCR, Rumex crispus, = US
SETFA, Setaria faberi, = US
AMBEL, Ambrosia artemisiifolia, = US
AMBTR, Ambrosia trifida, = US
POLPY, Persicaria pensylvanica, = US
DAUCA, Daucus carota, = US
CYPES, Cyperus esculentus, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professsor, Res. Assoc
Affiliation: OARDC/The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA
Trial Status: ONE-YEAR/FINAL
Trial Reliability: RELIABLE
Initiation Date: 8/17/2011
Planned Completion Date: 11/4/2011

COOPERATOR/LANDOWNER

Cooperator: Rick Callendar
Org: Muck Corps ARS
Address 1: 4875 SR103 South
City: Williard
State/Prov: OH
Postal Code: 44691
Country: USA
Phone No: 419-935-1201
Fax No: 419-935-0019

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: Marsh yellowcress, a serious weed problem in onions in the Willard muck area, is currently not controlled by current labeled herbicides, and has prompted research efforts from OARDC to find a herbicide that would effectively control the weed without causing significant onion injury. We conducted herbicide screening trials in 2009/2010 ; these trials resulted in 3 herbicide options (not currently labeled for onions) which effectively control marsh yellowcress. They were Sencor, Lorox and Chateau.
This year we repeated the marsh yellowcess herbicide screening trial (non-crop) in an area of high weed pressure to confirm last years' results. We then focused on testing these herbicides on green bunching onions using a rate structure to observe herbicide rates on crop injury and yield data.
Green onions were direct-seeded at the Muck Crops Branch 8/16/11, and the herbicides were applied broadcast preemergent. The onions were rated weekly for crop injury. Purslane and pigweed were present, and were rated for % control even though they were not the target weed. We hope to repeat this trial in 2012 to confirm onion crop tolerance and hopefully have Sencor labeled for weed control in green bunching onions, and possibly bulb onions.
Conclusions: Results indicate that Sencor at 0.75 lb/A can effectively control marsh yellowcress, (90% or better) and produce injury-free green bunching onions significantly equal to the weed-free control in average plant weight.
Lorox at 3lbs/A did not injure onions but only provided 58% control of marsh yellowcress at 5 weeks after treatment.
Sencor at 1lb/A, and Chateau at 3 & 4oz/A caused significant stunt and injury translating to in 68%, 54% and 60% crop loss respectively. Lorox at 5 lbs/A exhibited 20% injury at 7WAT, but didd not translate to crop loss.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AMASS	**Am**	aranth	Amaranthus sp.
2.	POROL	**Co**	mmon purslane	Portulaca oleracea

Crop 1: ALLCE ONION, GREEN **Variety:** Tokyo Long White
Planting Date: 8/16/2011 **Planting Method:** DIRECT DRILLED
Rate: 36 S/FT2 **Depth:** 0.5 IN
Row Spacing: 18 IN **Spacing Within Row:** 15 IN **Seed Bed:** SMOOTH
Soil Temperature: 85.6 F **Soil Moisture:** BELOW NORMAL **Emergence Date:** 8/23/2011

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RACOBL

MAINTENANCE

Field Prep./Maintenance: The trial was maintained with pesticides as outlined in the 2011 Ohio State University Vegetable Production Guide.

SOIL DESCRIPTION

% Sand: 0 **% OM:** 40.17 **Texture:** FINE
% Silt: 0 **pH:** 5.81 **Soil Name:** MUCK
% Clay: 0 **CEC:** 72.1 **Fert. Level:** EXCELLENT

Overall Moisture Conditions: NORMAL
Closest Weather Station: AT BRANCH **Distance:** 50 **Unit:** YD

APPLICATION DESCRIPTION

	A
Application Date:	8/10/2011
Time of Day:	11AM-NOON
Application Method:	SPRAY
Application Timing:	PREPRE
Applic. Placement:	BROSOI
Air Temp., Unit:	81 F
% Relative Humidity:	47
Wind Velocity, Unit:	3.5 MPH
Soil Moisture:	ADEQUATE
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	ALLCE
Stage Scale:	SEEDED
Height, Unit:	0 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AMASS PRE
Stage Scale:	0
Density, Unit:	0 FT2
Weed 2 Code, Stage:	POROL PRE
Stage Scale:	0
Density, Unit:	0 FT2

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

APPLICATION EQUIPMENT

	A
Operating Pressure:	40
Nozzle Type:	TTJET
Nozzle Size:	J60-11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

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GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	OUTLOOK	6	L	0.98	lb ai/a	PRE	A	13.07 ml/mx	103	213	307	405
4	SENCOR	75	DF	0.187	lb ai/a	PRE	A	2.39 g/mx	104	212	311	413
5	SENCOR	75	DF	0.375	lb ai/a	PRE	A	4.793 g/mx	105	210	306	402
6	SENCOR	75	DF	0.56	lb ai/a	PRE	A	7.158 g/mx	106	205	310	412
7	SENCOR	75	DF	0.75	lb ai/a	PRE	A	9.586 g/mx	107	202	301	411
8	LOROX	50	WP	1.5	lb ai/a	PRE	A	28.76 g/mx	108	203	305	410
9	LOROX	50	WP	2	lb ai/a	PRE	A	38.34 g/mx	109	208	304	409
10	LOROX	50	WP	2.5	lb ai/a	PRE	A	47.93 g/mx	110	207	308	403
11	CHATEAU	51	WDG	0.064	lb ai/a	PRE	A	1.203 g/mx	111	204	303	408
12	CHATEAU	51	WDG	0.096	lb ai/a	PRE	A	1.804 g/mx	112	201	312	404
13	CHATEAU	51	WDG	0.128	lb ai/a	PRE	A	2.406 g/mx	113	209	313	407

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	211	309	401
2	WEED-FREE CONTROL								102	206	302	406

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
16.332	ml	OUTLOOK	6	L	
29.909	g	SENCOR	75	DF	
143.791	g	LOROX	50	WP	
6.767	g	CHATEAU	51	WDG	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	1	402	5	403	10	404	12	405	3	406	2	407	13	408	11	409	9	410	8
3	3	301	7	302	2	303	11	304	9	305	8	306	5	307	3	308	10	309	1	310	6
2	2	201	12	202	7	203	8	204	11	205	6	206	2	207	10	208	9	209	13	210	5
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk						
4	4	411	7	412	6	413	4
3	3	311	4	312	12	313	13
2	2	211	1	212	4	213	3
1	1	111	11	112	12	113	13

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					ONION	ONION	AMAXX ONION	POROL ONION	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE
	Crop Code					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Part Rated					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS
	Rating Data Type					%	%	%	%	%	%	%	%	%	%
	Rating Unit					8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/13/2011
	Rating Date					2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT	3WAT	3WAT	4WAT
	Trt-Eval Interval					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
	# Subsamples, Dec.														
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					211	0	0	0	0	0	0	0	0	0	0
					309	0	0	0	0	0	0	0	0	0	0
					401	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	0	0	100	100	0	0	0	100	100	0
					206	0	0	100	100	0	0	0	100	100	0
					302	0	0	100	100	0	0	0	100	100	0
					406	0	0	100	100	0	0	0	100	100	0
					Mean =	0	0	100	100	0	0	0	100	100	0
3	OUTLOOK	0.98	lb ai/a	A	103	0	0	99	99	0	0	0	99	99	0
					213	0	0	99	99	0	25	0	99	99	0
					307	0	0	99	99	0	10	0	99	95	0
					405	0	25	99	99	0	20	0	99	99	0
					Mean =	0	6	99	99	0	14	0	99	98	0
4	SENCOR	0.187	lb ai/a	A	104	0	0	99	70	0	0	0	70	0	0
					212	0	0	99	70	0	0	0	0	20	0
					311	0	0	60	70	0	0	0	80	30	0
					413	0	0	50	70	0	0	0	0	20	0
					Mean =	0	0	77	70	0	0	0	38	18	0
5	SENCOR	0.375	lb ai/a	A	105	0	0	99	75	0	10	0	99	50	0
					210	0	0	99	95	0	0	0	99	80	0
					306	0	0	99	75	0	0	0	99	70	0
					402	0	0	99	75	0	5	0	99	40	0
					Mean =	0	0	99	80	0	4	0	99	60	0
6	SENCOR	0.56	lb ai/a	A	106	0	0	99	85	0	5	0	99	60	0
					205	0	0	99	80	0	0	0	99	30	0
					310	0	0	99	85	0	0	0	99	75	0
					412	0	0	99	85	0	0	0	99	80	0
					Mean =	0	0	99	84	0	1	0	99	61	0

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					ONION	ONION	AMAXX ONION	POROL ONION	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE
	Crop Code					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Part Rated					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS
	Rating Data Type					%	%	%	%	%	%	%	%	%	%
	Rating Unit					8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/13/2011
	Rating Date					2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT	3WAT	3WAT	4WAT
	Trt-Eval Interval					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
	# Subsamples, Dec.														
7	SENCOR	0.75	lb ai/a	A	107	0	0	99	95	0	35	0	99	85	0
					202	0	0	99	85	0	0	0	80	85	0
					301	0	10	99	99	0	40	0	99	95	0
					411	0	15	99	99	0	50	0	99	99	0
					Mean =	0	6	99	95	0	31	0	94	91	0
8	LOROX	1.5	lb ai/a	A	108	0	0	99	75	0	0	0	99	40	0
					203	0	0	99	75	0	0	0	99	0	0
					305	0	0	99	70	0	0	0	99	15	0
					410	0	0	99	70	0	0	0	99	0	0
					Mean =	0	0	99	73	0	0	0	99	14	0
9	LOROX	2	lb ai/a	A	109	0	0	99	85	0	15	0	99	80	0
					208	0	0	70	80	0	5	0	80	50	0
					304	0	0	70	80	0	0	0	0	50	0
					409	0	0	99	80	0	0	0	99	50	0
					Mean =	0	0	85	81	0	5	0	70	58	0
10	LOROX	2.5	lb ai/a	A	110	0	0	99	99	0	25	0	99	95	0
					207	0	0	99	99	0	20	0	99	70	0
					308	0	0	99	99	0	15	0	99	95	0
					403	0	0	99	80	0	15	0	99	50	0
					Mean =	0	0	99	94	0	19	0	99	78	0
11	CHATEAU	0.064	lb ai/a	A	111	0	25	99	95	0	20	0	99	95	0
					204	0	0	99	99	0	0	0	99	99	0
					303	0	0	99	99	0	0	0	99	95	0
					408	0	25	99	99	0	5	5	99	99	0
					Mean =	0	13	99	98	0	6	1	99	97	0
12	CHATEAU	0.096	lb ai/a	A	112	0	40	99	99	0	25	0	99	99	0
					201	0	0	99	99	0	25	0	99	99	0
					312	0	30	99	99	0	30	30	99	99	0
					404	0	30	99	99	0	0	0	99	99	0
					Mean =	0	25	99	99	0	20	8	99	99	0

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					ONION	ONION	AMAXX ONION	POROL ONION	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE
	Crop Code					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Part Rated					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS
	Rating Data Type					%	%	%	%	%	%	%	%	%	%
	Rating Unit					8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/13/2011
	Rating Date					2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT	3WAT	3WAT	4WAT
	Trt-Eval Interval					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
	# Subsamples, Dec.														
13	CHATEAU	0.128	lb ai/a	A	113	0	50	99	99	0	30	0	99	99	0
					209	0	15	99	99	0	0	0	99	99	0
					313	0	50	99	99	0	40	40	99	99	0
					407	0	70	99	99	0	50	50	99	99	0
					Mean =	0	46	99	99	0	30	23	99	99	0

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20
	Weed Code							AMAXX	POROL				AMAXX	POROL	
	Crop Code					ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Rating Data Type					STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	AVE HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM
	Rating Date					9/13/2011	9/13/2011	9/13/2011	9/13/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011
	Trt-Eval Interval					4WAT	4WAT	4WAT	4WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2
1	UNTREATED CONTROL				101	0	0	0	0	0	10	0	0	0	0.32
					211	0	0	0	0	0	15	0	0	0	0.20
					309	0	0	0	0	0	0	0	0	0	0.27
					401	0	0	0	0	0	0	0	0	0	0.25
					Mean =	0	0	0	0	0	6	0	0	0	0.26
2	WEED-FREE CONTROL				102	0	0	100	100	0	0	0	100	100	0.22
					206	0	0	100	100	0	0	0	100	100	0.28
					302	0	0	100	100	0	0	0	100	100	0.29
					406	0	0	100	100	0	0	0	100	100	0.29
					Mean =	0	0	100	100	0	0	0	100	100	0.27
3	OUTLOOK	0.98	lb ai/a	A	103	0	0	99	99	0	0	0	99	99	0.26
					213	0	0	99	99	0	10	15	99	99	0.15
					307	0	0	99	99	0	0	5	99	99	0.22
					405	15	0	99	99	0	10	5	99	99	0.25
					Mean =	4	0	99	99	0	5	6	99	99	0.22
4	SENCOR	0.187	lb ai/a	A	104	0	0	0	0	0	0	0	0	0	0.22
					212	0	0	99	0	0	15	10	0	0	0.12
					311	0	0	0	20	0	10	0	0	0	0.26
					413	0	0	0	0	0	0	0	80	0	0.21
					Mean =	0	0	25	5	0	6	3	20	0	0.20
5	SENCOR	0.375	lb ai/a	A	105	0	0	99	15	0	0	0	99	0	0.14
					210	0	0	99	85	0	10	10	99	0	0.20
					306	0	0	99	70	0	0	5	99	0	0.26
					402	0	0	99	40	0	5	0	99	70	0.26
					Mean =	0	0	99	53	0	4	4	99	18	0.22
6	SENCOR	0.56	lb ai/a	A	106	0	0	99	15	0	0	0	99	0	0.19
					205	0	0	99	0	0	10	0	99	0	0.26
					310	0	0	99	80	0	0	20	99	80	0.22
					412	0	0	99	80	0	0	0	99	80	0.27
					Mean =	0	0	99	44	0	3	5	99	40	0.24

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20
	Weed Code					ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE
	Crop Code					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Part Rated					STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	AVE HEIGHT
	Rating Data Type					%	%	%	%	%	%	%	%	%	CM
	Rating Unit					9/13/2011	9/13/2011	9/13/2011	9/13/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011
	Rating Date					4WAT	4WAT	4WAT	4WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT
	Trt-Eval Interval					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2
	# Subsamples, Dec.														
7	SENCOR	0.75	lb ai/a	A	107	20	50	99	85	0	40	65	99	85	0.11
					202	10	40	0	85	0	25	25	0	99	0.18
					301	20	20	99	95	0	35	50	99	99	0.19
					411	15	25	99	99	0	15	60	99	99	0.20
					Mean =	16	34	74	91	0	29	50	74	96	0.17
8	LOROX	1.5	lb ai/a	A	108	0	0	99	0	0	0	0	99	0	0.16
					203	0	0	99	15	0	0	0	99	0	0.26
					305	0	0	50	0	0	0	0	0	0	0.26
					410	0	0	0	0	0	0	0	0	0	0.28
					Mean =	0	0	62	4	0	0	0	50	0	0.24
9	LOROX	2	lb ai/a	A	109	15	0	99	70	0	30	0	99	85	0.14
					208	0	0	99	50	0	15	0	0	0	0.22
					304	0	0	0	50	0	0	0	0	0	0.26
					409	0	0	99	70	0	0	0	99	99	0.29
					Mean =	4	0	74	60	0	11	0	50	46	0.23
10	LOROX	2.5	lb ai/a	A	110	0	0	99	95	0	35	0	99	90	0.13
					207	0	0	99	60	0	30	0	99	0	0.20
					308	10	0	99	90	0	10	10	99	75	0.21
					403	10	0	99	65	0	10	0	99	70	0.21
					Mean =	5	0	99	78	0	21	3	99	59	0.19
11	CHATEAU	0.064	lb ai/a	A	111	0	15	99	95	0	40	20	99	90	0.14
					204	0	0	99	99	0	0	0	99	99	0.42
					303	0	0	99	99	0	0	5	99	99	0.26
					408	0	0	99	99	0	0	5	99	99	0.26
					Mean =	0	4	99	98	0	10	8	99	97	0.27
12	CHATEAU	0.096	lb ai/a	A	112	0	20	99	99	0	40	30	99	99	0.11
					201	10	25	99	99	0	25	15	99	99	0.21
					312	0	5	99	99	0	0	40	99	99	0.25
					404	0	15	99	99	0	10	10	99	99	0.28
					Mean =	3	16	99	99	0	19	24	99	99	0.21

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20
	Weed Code					ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE
	Crop Code														
	Part Rated					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -
	Rating Data Type					STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	AVE HEIGHT
	Rating Unit					%	%	%	%	%	%	%	%	%	CM
	Rating Date					9/13/2011	9/13/2011	9/13/2011	9/13/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011
	Trt-Eval Interval					4WAT	4WAT	4WAT	4WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2
13	CHATEAU	0.128	lb ai/a	A	113	0	30	99	99	0	45	50	99	99	0.09
					209	0	15	99	99	0	0	30	99	99	0.23
					313	0	10	99	99	0	15	25	99	99	0.19
					407	15	50	99	99	0	10	60	99	99	0.23
					Mean =	4	26	99	99	0	18	41	99	99	0.19

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	21 ALLCE PLANT - STAND COUNT NO/PLOT 10/25/2011 HARVEST - 0	22 ALLCE FINAL - WEIGHT G/PLOT 10/25/2011 HARVEST - 0	23 ALLCE AVE - WT/PLANT GRAMS 10/25/2011 HARVEST - 2
1	UNTREATED CONTROL				101	638	1045	1.64
					211	608	1383	2.27
					309	557	1888	3.39
					401	519	1807	3.48
					Mean =	581	1531	2.70
2	WEED-FREE CONTROL				102	567	2056	3.63
					206	646	3234	5.01
					302	585	2972	5.08
					406	572	3274	5.72
					Mean =	593	2884	4.86
3	OUTLOOK	0.98	lb ai/a	A	103	581	1157	1.99
					213	609	961	1.58
					307	536	2482	5.30
					405	383	2145	5.60
					Mean =	527	1686	3.62
4	SENCOR	0.187	lb ai/a	A	104	581	1630	2.81
					212	585	1413	2.42
					311	569	2043	3.59
					413	625	2191	3.51
					Mean =	590	1819	3.08
5	SENCOR	0.375	lb ai/a	A	105	529	1385	2.62
					210	415	1465	3.53
					306	447	2494	5.58
					402	443	2135	4.82
					Mean =	459	1870	4.14
6	SENCOR	0.56	lb ai/a	A	106	496	1358	2.74
					205	558	2515	4.51
					310	447	2017	4.51
					412	609	2659	4.37
					Mean =	528	2137	4.03

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	21 ALLCE PLANT - STAND COUNT NO/PLOT 10/25/2011 HARVEST - 0	22 ALLCE FINAL - WEIGHT G/PLOT 10/25/2011 HARVEST - 0	23 ALLCE AVE - WT/PLANT GRAMS 10/25/2011 HARVEST - 2
7	SENCOR	0.75	lb ai/a	A	107	201	324	1.61
					202	193	777	4.03
					301	201	723	3.60
					411	181	828	4.57
					Mean =	194	663	3.45
8	LOROX	1.5	lb ai/a	A	108	602	1490	2.48
					203	571	2200	3.85
					305	586	2917	4.98
					410	598	2526	4.22
					Mean =	589	2283	3.88
9	LOROX	2	lb ai/a	A	109	600	971	1.62
					208	538	1689	3.14
					304	498	2143	4.30
					409	598	2599	4.35
					Mean =	559	1851	3.35
10	LOROX	2.5	lb ai/a	A	110	583	893	1.53
					207	516	1578	3.06
					308	503	1755	3.49
					403	511	1798	3.52
					Mean =	528	1506	2.90
11	CHATEAU	0.064	lb ai/a	A	111	259	277	1.07
					204	464	2165	4.67
					303	529	2580	4.88
					408	338	2099	6.21
					Mean =	398	1780	4.21
12	CHATEAU	0.096	lb ai/a	A	112	288	359	1.25
					201	275	870	3.16
					312	288	1350	4.69
					404	317	1652	5.21
					Mean =	292	1058	3.58

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	21	22	23
	Weed Code					ALLCE	ALLCE	ALLCE
	Crop Code					PLANT -	FINAL -	AVE -
	Part Rated					STAND COUNT	WEIGHT	WT/PLANT
	Rating Data Type					NO/PLOT	G/PLOT	GRAMS
	Rating Unit					10/25/2011	10/25/2011	10/25/2011
	Rating Date					HARVEST	HARVEST	HARVEST
	Trt-Eval Interval					- 0	- 0	- 2
	# Subsamples, Dec.							
13	CHATEAU	0.128	lb ai/a	A	113	236	126	0.53
					209	253	1110	4.39
					313	285	1109	3.89
					407	116	834	7.19
					Mean =	223	795	4.00

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GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
POROL = Portulaca oleracea
Crop Code
ALLCE = ONION, SCALLION / ALLIUM CEPA L.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code						AMAXX	POROL				AMAXX	POROL		
	Crop Code				ONION	ONION	ONION	ONION	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated				PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -
	Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	CHLOROSIS	STUNT
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	9/13/2011	9/13/2011
	Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT	3WAT	3WAT	4WAT	4WAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 a	0 c	0 c	0 d	0 a	0 b	0 b	0 c	0 c	0 a	0 b
2	WEED-FREE CONTROL				0 a	0 c	100 a	100 a	0 a	0 b	0 b	100 a	100 a	0 a	0 b
3	OUTLOOK	0.98	lb ai/a	A	0 a	6 c	99 a	99 a	0 a	14 ab	0 b	99 a	98 a	0 a	4 b
4	SENCOR	0.187	lb ai/a	A	0 a	0 c	77 b	70 c	0 a	0 b	0 b	38 b	18 c	0 a	0 b
5	SENCOR	0.375	lb ai/a	A	0 a	0 c	99 a	80 b	0 a	4 b	0 b	99 a	60 b	0 a	0 b
6	SENCOR	0.56	lb ai/a	A	0 a	0 c	99 a	84 b	0 a	1 b	0 b	99 a	61 b	0 a	0 b
7	SENCOR	0.75	lb ai/a	A	0 a	6 c	99 a	95 a	0 a	31 a	0 b	94 a	91 a	0 a	16 a
8	LOROX	1.5	lb ai/a	A	0 a	0 c	99 a	73 c	0 a	0 b	0 b	99 a	14 c	0 a	0 b
9	LOROX	2	lb ai/a	A	0 a	0 c	85 ab	81 b	0 a	5 b	0 b	70 a	58 b	0 a	4 b
10	LOROX	2.5	lb ai/a	A	0 a	0 c	99 a	94 a	0 a	19 ab	0 b	99 a	78 ab	0 a	5 b
11	CHATEAU	0.064	lb ai/a	A	0 a	13 bc	99 a	98 a	0 a	6 b	1 b	99 a	97 a	0 a	0 b
12	CHATEAU	0.096	lb ai/a	A	0 a	25 b	99 a	99 a	0 a	20 ab	8 b	99 a	99 a	0 a	3 b
13	CHATEAU	0.128	lb ai/a	A	0 a	46 a	99 a	99 a	0 a	30 a	23 a	99 a	99 a	0 a	4 b
	LSD (P=.05)				0.0	12.7	12.2	6.5	0.0	15.0	11.8	26.2	18.3	0.0	6.3
	Standard Deviation				0.0	8.9	8.6	4.6	0.0	10.5	8.3	18.3	12.8	0.0	4.4
	CV				0.0	119.75	9.64	5.53	0.0	104.96	343.86	21.81	19.06	0.0	163.78
	Bartlett's X2				0.0	3.454	0.531	14.775	0.0	19.043	9.97	5.816	21.166	0.0	1.233
	P(Bartlett's X2)				.	0.485	0.466	0.022*	.	0.015*	0.007*	0.055	0.007*	.	0.942
	Replicate F				0.000	3.823	0.890	0.458	0.000	1.047	1.508	0.508	0.953	0.000	0.857
	Replicate Prob(F)				1.0000	0.0178	0.4557	0.7135	1.0000	0.3835	0.2289	0.6795	0.4255	1.0000	0.4721
	Treatment F				0.000	9.693	41.513	139.896	0.000	4.831	2.385	11.480	31.923	0.000	4.170
	Treatment Prob(F)				1.0000	0.0001	0.0001	0.0001	1.0000	0.0001	0.0219	0.0001	0.0001	1.0000	0.0004

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21
	Weed Code				ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE	ALLCE	ALLCE	AMAXX ALLCE	POROL ALLCE	ALLCE	ALLCE
	Crop Code													
	Part Rated				PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -
	Rating Data Type				STAND LOSS	CONTROL	CONTROL	CHLOROSIS	STUNT	STAND LOSS	CONTROL	CONTROL	AVE HEIGHT	STAND COUNT
	Rating Unit				%	%	%	%	%	%	%	%	CM	NO/PLOT
	Rating Date				9/13/2011	9/13/2011	9/13/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/4/2011	10/25/2011
	Trt-Eval Interval				4WAT	4WAT	4WAT	7WAT	7WAT	7WAT	7WAT	7WAT	7WAT	HARVEST
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2	- 0
1	UNTREATED CONTROL				0 b	0 c	0 d	0 a	6 ab	0 c	0 b	0 c	0.26 a	581 a
2	WEED-FREE CONTROL				0 b	100 a	100 a	0 a	0 b	0 c	100 a	100 a	0.27 a	593 a
3	OUTLOOK	0.98	lb ai/a	A	0 b	99 a	99 a	0 a	5 b	6 c	99 a	99 a	0.22 a	527 a
4	SENCOR	0.187	lb ai/a	A	0 b	25 bc	5 d	0 a	6 ab	3 c	20 b	0 c	0.20 a	590 a
5	SENCOR	0.375	lb ai/a	A	0 b	99 a	53 bc	0 a	4 b	4 c	99 a	18 bc	0.22 a	459 ab
6	SENCOR	0.56	lb ai/a	A	0 b	99 a	44 c	0 a	3 b	5 c	99 a	40 bc	0.24 a	528 a
7	SENCOR	0.75	lb ai/a	A	34 a	74 ab	91 a	0 a	29 a	50 a	74 a	96 a	0.17 a	194 c
8	LOROX	1.5	lb ai/a	A	0 b	62 ab	4 d	0 a	0 b	0 c	50 ab	0 c	0.24 a	589 a
9	LOROX	2	lb ai/a	A	0 b	74 ab	60 bc	0 a	11 ab	0 c	50 ab	46 bc	0.23 a	559 a
10	LOROX	2.5	lb ai/a	A	0 b	99 a	78 ab	0 a	21 ab	3 c	99 a	59 ab	0.19 a	528 a
11	CHATEAU	0.064	lb ai/a	A	4 b	99 a	98 a	0 a	10 ab	8 c	99 a	97 a	0.27 a	398 b
12	CHATEAU	0.096	lb ai/a	A	16 b	99 a	99 a	0 a	19 ab	24 b	99 a	99 a	0.21 a	292 c
13	CHATEAU	0.128	lb ai/a	A	26 a	99 a	99 a	0 a	18 ab	41 a	99 a	99 a	0.19 a	223 c
	LSD (P=.05)				9.7	39.5	23.2	0.0	14.5	13.1	40.6	33.5	0.073	86.9
	Standard Deviation				6.8	27.6	16.2	0.0	10.1	9.2	28.4	23.4	0.051	60.8
	CV				110.59	34.95	25.43	0.0	100.4	83.68	37.42	40.51	22.78	13.04
	Bartlett's X2				2.819	0.008	26.743	0.0	13.94	11.691	0.46	17.356	8.104	28.944
	P(Bartlett's X2)				0.42	1.00	0.001*	.	0.176	0.166	0.928	0.004*	0.777	0.004*
	Replicate F				1.855	0.552	1.007	0.000	5.295	0.678	1.137	2.380	6.492	0.713
	Replicate Prob(F)				0.1548	0.6501	0.4009	1.0000	0.0040	0.5712	0.3474	0.0857	0.0013	0.5506
	Treatment F				11.616	5.565	23.857	0.000	3.117	13.274	6.040	13.318	1.600	22.366
	Treatment Prob(F)				0.0001	0.0001	0.0001	1.0000	0.0041	0.0001	0.0001	0.0001	0.1356	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	ALLCE FINAL - WEIGHT G/PLOT 10/25/2011 HARVEST - 0	ALLCE AVE - WT/PLANT GRAMS 10/25/2011 HARVEST - 2
	Weed Code					
	Crop Code					
	Part Rated					
	Rating Data Type					
	Rating Unit					
	Rating Date					
	Trt-Eval Interval					
	# Subsamples, Dec.					
					22	23
1	UNTREATED CONTROL				1531 bc	2.70 a
2	WEED-FREE CONTROL				2884 a	4.86 a
3	OUTLOOK	0.98	lb ai/a	A	1686 bc	3.62 a
4	SENCOR	0.187	lb ai/a	A	1819 b	3.08 a
5	SENCOR	0.375	lb ai/a	A	1870 b	4.14 a
6	SENCOR	0.56	lb ai/a	A	2137 b	4.03 a
7	SENCOR	0.75	lb ai/a	A	663 d	3.45 a
8	LOROX	1.5	lb ai/a	A	2283 b	3.88 a
9	LOROX	2	lb ai/a	A	1851 b	3.35 a
10	LOROX	2.5	lb ai/a	A	1506 bc	2.90 a
11	CHATEAU	0.064	lb ai/a	A	1780 b	4.21 a
12	CHATEAU	0.096	lb ai/a	A	1058 cd	3.58 a
13	CHATEAU	0.128	lb ai/a	A	795 d	4.00 a
	LSD (P=.05)				480.1	1.219
	Standard Deviation				335.9	0.853
	CV				19.98	23.21
	Bartlett's X2				8.257	13.114
	P(Bartlett's X2)				0.765	0.361
	Replicate F				27.432	28.742
	Replicate Prob(F)				0.0001	0.0001
	Treatment F				12.921	1.949
	Treatment Prob(F)				0.0001	0.0608

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

GREEN ONIONS - CROP TOLERANCE TO PRE HERBICIDES

Trial ID: GONIONCTPREBRANCH2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
POROL = Portulaca oleracea
Crop Code
ALLCE = ONION, SCALLION / ALLIUM CEPA L.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Res. Assoc.
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Willard
State/Prov.: OH
Postal Code: 44890
Country: USA
Trial Status: ONE-YEAR/FINAL
Trial Reliability: Reliable
Initiation Date: 8/16/2011
Planned Completion Date: 9/30/2011

COOPERATOR/LANDOWNER

Cooperator: Rick Callendar
Org: Muck Crops ARS
Address 1: 4875 SR 103 South
City: Willard
State/Prov: OH
Postal Code: 44890
Country: USA
Phone No: 419-680-6175
Fax No: 419-935-0019

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: To find a replacement for "Kerb" herbicide, a long-time "standard" for lettuce, currently illegal to use due to carcinogenic issues.
Conclusions: Results indicate that treatment #7, Bolero 8EC at 6 pints/A, although not labeled for lettuce in Ohio, has proven to be a potential candidate to replace Kerb 50DF at 12 lbs/A. Its' positive features include no crop injury, excellent purslane control, significantly higher pigweed control over Kerb, and harvest head weight statistically equal to Kerb.
Significant inury was observed with Dual Magnum 1.07 pts/A, (2WAT), and both Prowl H2O treatments, (2 thru 4 WAT). This trial will hopefully be repeated in 2012 to confirm the 2011 results

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AMACH	**Sm**	ooth pigweed	Amaranthus hybridus
2.	POROL	**Co**	mmon purslane	Portulaca oleracea

Crop 1: LACSA LETTUCE **Variety:** TEHAMA
Planting Date: 8/16/2011 **Planting Method:** TRANSPLANTED - MACHINE
Rate: 1 P/ROW-FT **Depth:** 0.25 IN
Row Spacing: 18 IN **Spacing Within Row:** 10 IN **Seed Bed:** SMOOTH
Soil Temperature: 85.6 F **Soil Moisture:** BELOW NORMAL

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RACOBL

MAINTENANCE

Field Prep./Maintenance: 6/6/11: field plowed
8/15/11: beds made and disked
8/17/ 11: lettuce transplanted; irrigated with 1.4" water
8/23/11: irrigated with 0.5" water
9/16/11: insect spray at 3oz/A "Belay"

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

SOIL DESCRIPTION

% Sand: 0 **% OM:** 41.56 **Texture:** MUCK
% Silt: 0 **pH:** 5.57 **Soil Name:** LINWOOD MUCK
% Clay: 0 **CEC:** 70.5 **Fert. Level:** HIGH

Overall Moisture Conditions: NORMAL
Closest Weather Station: AT BRANCH **Distance:** 50 **Unit:** YD

APPLICATION DESCRIPTION

	A
Application Date:	8/17/2011
Time of Day:	1-3PM
Application Method:	SPRAY
Application Timing:	POSTTR
Applic. Placement:	BROFOL
Air Temp., Unit:	81.5 F
% Relative Humidity:	42.6
Wind Velocity, Unit:	2 MPH
Soil Temp., Unit:	85.7 F
Soil Moisture:	DRY
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	LACSA POSTTP
Stage Scale:	2 LEAF
Height, Unit:	3 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AMACH POSTTP
Stage Scale:	NONE
Density, Unit:	0 PLOT
Weed 2 Code, Stage:	POROL POSTTP
Stage Scale:	NONE
Density, Unit:	0 PLOT

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	BACKPACK
Operating Pressure:	40
Nozzle Type:	TURBOTWIN
Nozzle Size:	J60-11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

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Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	BOLERO	8	EC	3	lb ai/a	POSTTP	B	30.0 ml/mx	103	201	310	404
4	PREFAR	4	E	6	lb ai/a	POSTTP	B	120.0 ml/mx	104	205	308	412
5	PREFAR	4	E	9	lb ai/a	POSTTP	B	180.0 ml/mx	105	210	307	411
6	PREFAR	4	E	12	lb ai/a	POSTTP	B	240.0 ml/mx	106	208	311	401
7	BOLERO	8	EC	6	lb ai/a	POSTTP	B	59.99 ml/mx	107	206	304	409
8	DUAL MAGNUM	7.62	L	0.65	lb ai/a	POSTTP	B	6.823 ml/mx	108	212	303	407
9	DUAL MAGNUM	7.62	L	1.02	lb ai/a	POSTTP	B	10.71 ml/mx	109	202	305	403
10	PROWL H2O+	3.8	CS	1.0	lb ai/a	POSTTP	B	21.05 ml/mx	110	203	309	402
11	PROWL H2O+	3.8	CS	2	lb ai/a	POSTTP	B	42.1 ml/mx	111	204	302	410
12	KERB	50	DF	6	lb ai/a	POSTTP	B	115.0 g/mx	112	211	306	408

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Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	WEEDY CONTROL								101	207	312	405
2	WEED FREE CONTROL								102	209	301	406

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
112.488	ml	BOLERO	8	EC	
674.927	ml	PREFAR	4	E	
21.914	ml	DUAL MAGNUM	7.62	L	
78.939	ml	PROWL H2O+	3.8	CS	
143.791	g	KERB	50	DF	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

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Rep	Blk																		
4	4	401	6	402	10	403	9	404	3	405	1	406	2	407	8	408	12	409	7	410	11
3	3	301	2	302	11	303	8	304	7	305	9	306	12	307	5	308	4	309	10	310	3
2	2	201	3	202	9	203	10	204	11	205	4	206	7	207	1	208	6	209	2	210	5
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk				
4	4	411	5	412	4
3	3	311	6	312	1
2	2	211	12	212	8
1	1	111	11	112	12

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Weed Code					LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA
Crop Code															
Part Rated					PLANT	PLANT	WEED	WEED	PLANT	PLANT	WEED	WEED	PLANT	PLANT	WEED
Rating Data Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%	%
Rating Date					8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011
Trt-Eval Interval					1WAT	1WAT	1WAT	1WAT	2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT
# Subsamples, Dec.					- 0	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
1	WEEDY CONTROL				101	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
					207	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					312	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					405	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
2	WEED FREE CONTROL				102	0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0
					209	0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0
					301	0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0
					406	0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0
					Mean =	0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0
3	BOLERO	3	lb ai/a	B	103	0	0.0	80.0	80.0	0.0	0.0	70.0	80.0	0.0	0.0	50.0
					201	0	0.0	70.0	85.0	0.0	10.0	80.0	85.0	0.0	0.0	50.0
					310	0	0.0	70.0	80.0	0.0	0.0	60.0	70.0	0.0	10.0	30.0
					404	0	0.0	95.0	95.0	0.0	0.0	85.0	95.0	0.0	0.0	70.0
					Mean =	0	0.0	78.8	85.0	0.0	2.5	73.8	82.5	0.0	2.5	50.0
4	PREFAR	6	lb ai/a	B	104	0	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0	0.0	75.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0
					308	0	0.0	95.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					412	0	0.0	85.0	85.0	0.0	0.0	65.0	75.0	0.0	0.0	30.0
					Mean =	0	0.0	86.3	58.8	0.0	0.0	35.0	18.8	0.0	0.0	7.5
5	PREFAR	9	lb ai/a	B	105	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					210	0	0.0	0.0	70.0	0.0	0.0	60.0	60.0	0.0	15.0	0.0
					307	0	0.0	95.0	85.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0
					411	0	0.0	95.0	95.0	0.0	0.0	70.0	80.0	0.0	15.0	30.0
					Mean =	0	0.0	47.5	62.5	0.0	0.0	45.0	47.5	0.0	7.5	7.5
6	PREFAR	12	lb ai/a	B	106	0	0.0	99.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0	0.0	99.0	85.0	0.0	0.0	25.0	25.0	0.0	0.0	60.0
					311	0	0.0	90.0	85.0	0.0	0.0	60.0	60.0	0.0	15.0	30.0
					401	0	0.0	80.0	99.0	0.0	0.0	60.0	75.0	0.0	30.0	0.0
					Mean =	0	0.0	92.0	67.3	0.0	0.0	36.3	40.0	0.0	11.3	22.5

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Weed Code					LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA
Crop Code															
Part Rated					PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	WEED -
Rating Data Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%	%
Rating Date					8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011
Trt-Eval Interval					1WAT	1WAT	1WAT	1WAT	2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT
# Subsamples, Dec.					- 0	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
7	BOLERO	6	lb ai/a	B	107	0	0.0	99.0	99.0	0.0	0.0	90.0	95.0	0.0	0.0	95.0
					206	0	0.0	99.0	99.0	0.0	10.0	95.0	99.0	0.0	0.0	95.0
					304	0	0.0	99.0	99.0	0.0	0.0	95.0	99.0	0.0	10.0	95.0
					409	0	0.0	99.0	99.0	0.0	0.0	95.0	99.0	0.0	0.0	95.0
					Mean =	0	0.0	99.0	99.0	0.0	2.5	93.8	98.0	0.0	2.5	95.0
8	DUAL MAGNUM	0.65	lb ai/a	B	108	0	0.0	99.0	90.0	0.0	15.0	50.0	70.0	0.0	0.0	20.0
					212	0	0.0	99.0	85.0	0.0	10.0	60.0	70.0	0.0	0.0	95.0
					303	0	0.0	80.0	80.0	0.0	0.0	65.0	70.0	0.0	15.0	0.0
					407	0	0.0	0.0	95.0	0.0	0.0	60.0	75.0	0.0	0.0	50.0
					Mean =	0	0.0	69.5	87.5	0.0	6.3	58.8	71.3	0.0	3.8	41.3
9	DUAL MAGNUM	1.02	lb ai/a	B	109	0	0.0	99.0	99.0	0.0	25.0	50.0	60.0	0.0	0.0	0.0
					202	0	0.0	80.0	90.0	0.0	15.0	75.0	85.0	0.0	25.0	0.0
					305	0	0.0	99.0	85.0	0.0	0.0	80.0	70.0	0.0	0.0	70.0
					403	0	0.0	80.0	99.0	0.0	10.0	80.0	80.0	0.0	20.0	60.0
					Mean =	0	0.0	89.5	93.3	0.0	12.5	71.3	73.8	0.0	11.3	32.5
10	PROWL H2O+	1.0	lb ai/a	B	110	0	0.0	99.0	90.0	0.0	30.0	40.0	75.0	0.0	25.0	0.0
					203	0	0.0	80.0	80.0	0.0	15.0	60.0	60.0	0.0	15.0	0.0
					309	0	0.0	95.0	70.0	0.0	0.0	50.0	60.0	0.0	20.0	0.0
					402	0	0.0	80.0	90.0	0.0	25.0	50.0	85.0	0.0	35.0	0.0
					Mean =	0	0.0	88.5	82.5	0.0	17.5	50.0	70.0	0.0	23.8	0.0
11	PROWL H2O+	2	lb ai/a	B	111	0	0.0	90.0	99.0	0.0	50.0	85.0	85.0	0.0	85.0	99.0
					204	0	0.0	85.0	85.0	0.0	25.0	75.0	99.0	0.0	50.0	85.0
					302	0	0.0	80.0	80.0	0.0	40.0	80.0	95.0	0.0	60.0	80.0
					410	0	0.0	90.0	90.0	0.0	0.0	95.0	95.0	0.0	50.0	80.0
					Mean =	0	0.0	86.3	88.5	0.0	28.8	83.8	93.5	0.0	61.3	86.0
12	KERB	6	lb ai/a	B	112	0	0.0	99.0	99.0	0.0	5.0	99.0	99.0	0.0	25.0	99.0
					211	0	0.0	80.0	95.0	0.0	0.0	70.0	99.0	0.0	15.0	75.0
					306	0	0.0	90.0	99.0	0.0	0.0	85.0	95.0	0.0	0.0	80.0
					408	0	0.0	95.0	95.0	0.0	5.0	90.0	99.0	0.0	0.0	40.0
					Mean =	0	0.0	91.0	97.0	0.0	2.5	86.0	98.0	0.0	10.0	73.5

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Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code				POROL LACSA	LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	LACSA
Crop Code				WEED -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -
Part Rated				CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	TOTAL NO	TOTAL WT	AVE.WT
Rating Data Type				%	%	%	%	%	PER 15'	KG	KG
Rating Unit				9/7/2011	9/13/2011	9/13/2011	9/13/2011	9/13/2011	9/21/2011	9/21/2011	9/21/2011
Rating Date				3WAT	4WAT	4WAT	4WAT	4WAT	HARVEST	HARVEST	HARVEST
Trt-Eval Interval				0 -	0 -	0 -	0 -	0 -	- 0	- 2	- 2
# Subsamples, Dec.											
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19
1	WEEDY CONTROL			101	0.0	0.0	0.0	0.0	0.0	8	3.10	0.39
				207	0.0	0.0	0.0	0.0	0.0	8	3.73	0.47
				312	0.0	0.0	0.0	0.0	0.0	7	3.12	0.45
				405	0.0	0.0	0.0	0.0	0.0	7	2.09	0.30
				Mean =	0.0	0.0	0.0	0.0	0.0	8	3.01	0.40
2	WEED FREE CONTROL			102	100.0	0.0	0.0	100.0	100.0	7	2.27	0.32
				209	100.0	0.0	0.0	100.0	100.0	7	3.72	0.53
				301	100.0	0.0	0.0	100.0	100.0	8	3.71	0.46
				406	100.0	0.0	0.0	100.0	100.0	8	3.80	0.48
				Mean =	100.0	0.0	0.0	100.0	100.0	8	3.38	0.45
3	BOLERO	3 lb ai/a	B	103	50.0	0.0	0.0	10.0	50.0	8	2.93	0.37
				201	80.0	0.0	0.0	60.0	70.0	8	3.21	0.40
				310	70.0	0.0	0.0	40.0	65.0	9	3.60	0.40
				404	90.0	0.0	0.0	30.0	85.0	8	3.26	0.41
				Mean =	72.5	0.0	0.0	35.0	67.5	8	3.25	0.39
4	PREFAR	6 lb ai/a	B	104	0.0	0.0	0.0	10.0	0.0	10	2.91	0.29
				205	0.0	0.0	0.0	0.0	0.0	8	3.33	0.42
				308	0.0	0.0	0.0	0.0	0.0	8	3.86	0.48
				412	70.0	0.0	0.0	0.0	75.0	6	2.13	0.36
				Mean =	17.5	0.0	0.0	2.5	18.8	8	3.06	0.39
5	PREFAR	9 lb ai/a	B	105	0.0	0.0	0.0	0.0	0.0	8	2.73	0.34
				210	0.0	0.0	10.0	0.0	0.0	8	2.98	0.37
				307	0.0	0.0	0.0	0.0	0.0	7	3.65	0.52
				411	75.0	0.0	0.0	0.0	70.0	7	2.78	0.40
				Mean =	18.8	0.0	2.5	0.0	17.5	8	3.04	0.41
6	PREFAR	12 lb ai/a	B	106	0.0	0.0	0.0	0.0	0.0	9	2.81	0.31
				208	40.0	0.0	0.0	15.0	15.0	8	3.55	0.44
				311	50.0	0.0	0.0	0.0	0.0	8	3.24	0.41
				401	75.0	0.0	0.0	0.0	70.0	6	2.11	0.35
				Mean =	41.3	0.0	0.0	3.8	21.3	8	2.93	0.38

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Weed Code				POROL LACSA	LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	LACSA
Crop Code				WEED -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -
Part Rated				CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	TOTAL NO	TOTAL WT	AVE.WT
Rating Data Type				%	%	%	%	%	PER 15'	KG	KG
Rating Unit				9/7/2011	9/13/2011	9/13/2011	9/13/2011	9/13/2011	9/21/2011	9/21/2011	9/21/2011
Rating Date				3WAT	4WAT	4WAT	4WAT	4WAT	HARVEST	HARVEST	HARVEST
Trt-Eval Interval				0 -	0 -	0 -	0 -	0 -	- 0	- 2	- 2
# Subsamples, Dec.											
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19
7	BOLERO	6 lb ai/a	B	107	90.0	0.0	0.0	99.0	90.0	10	2.49	0.25
				206	95.0	0.0	0.0	95.0	95.0	9	3.95	0.44
				304	99.0	0.0	0.0	95.0	95.0	9	3.81	0.42
				409	95.0	0.0	0.0	95.0	95.0	7	3.31	0.47
				Mean =	94.8	0.0	0.0	96.0	93.8	9	3.39	0.40
8	DUAL MAGNUM	0.65 lb ai/a	B	108	0.0	0.0	0.0	70.0	60.0	10	2.56	0.26
				212	70.0	0.0	0.0	90.0	55.0	9	3.99	0.44
				303	75.0	0.0	0.0	0.0	60.0	9	3.64	0.40
				407	60.0	0.0	0.0	0.0	60.0	8	3.95	0.49
				Mean =	51.3	0.0	0.0	40.0	58.8	9	3.54	0.40
9	DUAL MAGNUM	1.02 lb ai/a	B	109	0.0	0.0	0.0	0.0	45.0	9	3.48	0.39
				202	80.0	0.0	10.0	15.0	90.0	8	2.89	0.36
				305	50.0	0.0	0.0	75.0	60.0	8	2.87	0.36
				403	75.0	0.0	0.0	70.0	80.0	7	2.89	0.41
				Mean =	51.3	0.0	2.5	40.0	68.8	8	3.03	0.38
10	PROWL H2O+	1.0 lb ai/a	B	110	20.0	0.0	20.0	0.0	55.0	9	2.45	0.27
				203	65.0	0.0	10.0	0.0	60.0	7	3.00	0.43
				309	50.0	0.0	0.0	0.0	50.0	7	2.77	0.40
				402	85.0	0.0	25.0	0.0	75.0	8	2.47	0.31
				Mean =	55.0	0.0	13.8	0.0	60.0	8	2.67	0.35
11	PROWL H2O+	2 lb ai/a	B	111	99.0	0.0	70.0	90.0	85.0	5	0.38	0.08
				204	99.0	0.0	30.0	50.0	99.0	5	0.98	0.02
				302	85.0	0.0	35.0	25.0	40.0	7	1.26	0.18
				410	99.0	0.0	35.0	90.0	90.0	7	1.74	0.25
				Mean =	95.5	0.0	42.5	63.8	78.5	6	1.09	0.13
12	KERB	6 lb ai/a	B	112	99.0	0.0	25.0	99.0	99.0	8	1.96	0.25
				211	95.0	0.0	0.0	0.0	99.0	8	3.73	0.47
				306	95.0	0.0	0.0	0.0	95.0	7	3.77	0.53
				408	99.0	0.0	0.0	0.0	15.0	8	3.40	0.43
				Mean =	97.0	0.0	6.3	24.8	77.0	8	3.22	0.42

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
AMACH = Amaranthus hybridus
POROL = Portulaca oleracea
Crop Code
LACSA = LETTUCE / LACTUCA SATIVA L.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA	POROL LACSA	LACSA	LACSA	AMACH LACSA
	Crop Code														
	Part Rated				PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	WEED -
	Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/7/2011	9/7/2011	9/7/2011
	Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	2WAT	2WAT	2WAT	2WAT	3WAT	3WAT	3WAT
	# Subsamples, Dec.				- 0	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -
1	WEEDY CONTROL				0 a	0.0 a	0.0 b	0.0 b	0.0 a	0.0 b	0.0 f	0.0 e	0.0 a	2.5 b	0.0 e
2	WEED FREE CONTROL				0 a	0.0 a	100.0 a	100.0 a	0.0 a	0.0 b	100.0 a	100.0 a	0.0 a	0.0 b	100.0 a
3	BOLERO	3	lb ai/a	B	0 a	0.0 a	78.8 a	85.0 a	0.0 a	2.5 b	73.8 a-d	82.5 a	0.0 a	2.5 b	50.0 bcd
4	PREFAR	6	lb ai/a	B	0 a	0.0 a	86.3 a	58.8 a	0.0 a	0.0 b	35.0 e	18.8 de	0.0 a	0.0 b	7.5 de
5	PREFAR	9	lb ai/a	B	0 a	0.0 a	47.5 a	62.5 a	0.0 a	0.0 b	45.0 de	47.5 bc	0.0 a	7.5 b	7.5 de
6	PREFAR	12	lb ai/a	B	0 a	0.0 a	92.0 a	67.3 a	0.0 a	0.0 b	36.3 e	40.0 cd	0.0 a	11.3 b	22.5 de
7	BOLERO	6	lb ai/a	B	0 a	0.0 a	99.0 a	99.0 a	0.0 a	2.5 b	93.8 ab	98.0 a	0.0 a	2.5 b	95.0 a
8	DUAL MAGNUM	0.65	lb ai/a	B	0 a	0.0 a	69.5 a	87.5 a	0.0 a	6.3 b	58.8 b-e	71.3 ab	0.0 a	3.8 b	41.3 cde
9	DUAL MAGNUM	1.02	lb ai/a	B	0 a	0.0 a	89.5 a	93.3 a	0.0 a	12.5 b	71.3 a-d	73.8 ab	0.0 a	11.3 b	32.5 cde
10	PROWL H2O+	1.0	lb ai/a	B	0 a	0.0 a	88.5 a	82.5 a	0.0 a	17.5 ab	50.0 cde	70.0 ab	0.0 a	23.8 b	0.0 e
11	PROWL H2O+	2	lb ai/a	B	0 a	0.0 a	86.3 a	88.5 a	0.0 a	28.8 a	83.8 abc	93.5 a	0.0 a	61.3 a	86.0 ab
12	KERB	6	lb ai/a	B	0 a	0.0 a	91.0 a	97.0 a	0.0 a	2.5 b	86.0 ab	98.0 a	0.0 a	10.0 b	73.5 abc
	LSD (P=.05)				0.0	0.00	32.51	29.40	0.00	11.77	24.19	23.48	0.00	14.21	31.27
	Standard Deviation				0.0	0.00	22.52	20.36	0.00	8.15	16.75	16.26	0.00	9.84	21.66
	CV				0.0	0.0	29.11	26.52	0.0	134.95	27.41	24.6	0.0	86.68	50.39
	Bartlett's X2				0.0	0.0	33.809	38.122	0.0	14.579	27.695	44.615	0.0	9.448	9.571
	P(Bartlett's X2)				.	.	0.001*	0.001*	.	0.024*	0.001*	0.001*	.	0.397	0.214
	Replicate F				0.000	0.000	0.518	2.876	0.000	2.100	3.733	4.683	0.000	0.163	0.428
	Replicate Prob(F)				1.0000	1.0000	0.6725	0.0508	1.0000	0.1191	0.0205	0.0078	1.0000	0.9204	0.7342
	Treatment F				0.000	0.000	6.277	7.525	0.000	4.972	12.173	16.428	0.000	12.054	12.045
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	1.0000	0.0002	0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19
	Weed Code				POROL			AMACH	POROL			
	Crop Code				LACSA	LACSA	LACSA	LACSA	LACSA	LACSA	LACSA	LACSA
	Part Rated				WEED -	PLANT -	PLANT -	WEED -	WEED -	PLANT -	PLANT -	PLANT -
	Rating Data Type				CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	TOTAL NO	TOTAL WT	AVE.WT
	Rating Unit				%	%	%	%	%	PER 15'	KG	KG
	Rating Date				9/7/2011	9/13/2011	9/13/2011	9/13/2011	9/13/2011	9/21/2011	9/21/2011	9/21/2011
	Trt-Eval Interval				3WAT	4WAT	4WAT	4WAT	4WAT	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				0 -	0 -	0 -	0 -	0 -	- 0	- 2	- 2
1	WEEDY CONTROL				0.0 d	0.0 a	0.0 b	0.0 c	0.0 c	8 ab	3.01 a	0.40 a
2	WEED FREE CONTROL				100.0 a	0.0 a	0.0 b	100.0 a	100.0 a	8 ab	3.38 a	0.45 a
3	BOLERO	3	lb ai/a	B	72.5 ab	0.0 a	0.0 b	35.0 bc	67.5 a	8 a	3.25 a	0.39 a
4	PREFAR	6	lb ai/a	B	17.5 cd	0.0 a	0.0 b	2.5 c	18.8 bc	8 ab	3.06 a	0.39 a
5	PREFAR	9	lb ai/a	B	18.8 cd	0.0 a	2.5 b	0.0 c	17.5 bc	8 ab	3.04 a	0.41 a
6	PREFAR	12	lb ai/a	B	41.3 bc	0.0 a	0.0 b	3.8 c	21.3 bc	8 ab	2.93 a	0.38 a
7	BOLERO	6	lb ai/a	B	94.8 a	0.0 a	0.0 b	96.0 a	93.8 a	9 a	3.39 a	0.40 a
8	DUAL MAGNUM	0.65	lb ai/a	B	51.3 bc	0.0 a	0.0 b	40.0 bc	58.8 ab	9 a	3.54 a	0.40 a
9	DUAL MAGNUM	1.02	lb ai/a	B	51.3 bc	0.0 a	2.5 b	40.0 bc	68.8 a	8 ab	3.03 a	0.38 a
10	PROWL H2O+	1.0	lb ai/a	B	55.0 bc	0.0 a	13.8 b	0.0 c	60.0 ab	8 ab	2.67 a	0.35 a
11	PROWL H2O+	2	lb ai/a	B	95.5 a	0.0 a	42.5 a	63.8 ab	78.5 a	6 b	1.09 b	0.13 b
12	KERB	6	lb ai/a	B	97.0 a	0.0 a	6.3 b	24.8 bc	77.0 a	8 ab	3.22 a	0.42 a
	LSD (P=.05)				28.28	0.00	10.45	37.29	33.13	1.2	0.707	0.092
	Standard Deviation				19.59	0.00	7.23	25.82	22.95	0.9	0.489	0.063
	CV				33.83	0.0	128.61	76.37	41.61	11.03	16.5	16.98
	Bartlett's X2				27.122	0.0	6.781	29.301	28.09	9.844	8.221	12.009
	P(Bartlett's X2)				0.001*	.	0.148	0.001*	0.001*	0.544	0.693	0.363
	Replicate F				7.924	0.000	1.818	0.459	2.075	3.692	6.844	9.265
	Replicate Prob(F)				0.0004	1.0000	0.1631	0.7126	0.1224	0.0214	0.0010	0.0001
	Treatment F				12.491	0.000	11.584	7.971	8.170	3.005	6.743	6.374
	Treatment Prob(F)				0.0001	1.0000	0.0001	0.0001	0.0001	0.0071	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB HERBICIDE

Trial ID: LETTUCEKERBALTM 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
AMACH = Amaranthus hybridus
POROL = Portulaca oleracea
Crop Code
LACSA = LETTUCE / LACTUCA SATIVA L.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID:	MYCOHERBW2011	Study Dir.:	Doug Doohan, Tim Koch
Location:	Willard, Ohio	Investigator:	Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan, Tim Koch **Title:** Professor; Res. Assoc.
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio University
Postal Code: 44691

TRIAL LOCATION

City: Willard
State/Prov.: Ohio
Postal Code: 44890
Country: USA
Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/6/2010
Planned Completion Date: 7/15/2011

COOPERATOR/LANDOWNER

Cooperator: Bruce Buurma
Org: Buurma Farms Inc.
Address 1: Island View Lane
City: Willard
State/Prov: Ohio
Postal Code: 44890
Country: USA
Phone No: 419-935-6411

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: This was a non-crop repeat trial from 2010, with 11 PRE treatments and an untreated control. Marsh yellowcress, (Rorippa palustris) is a serious problem in the muck area around Willard, Ohio.The results from this trial will verify the most promising treatments for future control of this weed.
Conclusions: The results were consistent with the 2010 data. The most promising herbicides for marsh yellowcress control (at 3 weeks after application) were Sencor, (100% control); Sandea, (93% control); Lorox, (80% control), and Chateau, (60% control).

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	RORPA	Ye	llow marshcress	Rorippa palustris

Crop 1: NONE

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: Level Field
Tillage Type: Conventional **Study Design:** RACOBL

MAINTENANCE

Field Prep./Maintenance: No Maintenance on trial.

SOIL DESCRIPTION

% Sand: 64 **% OM:** 47.9 **Texture:** Muck
% Silt: 31 **pH:** 5.4 **Soil Name:** Linwood Muck
% Clay: 5 **CEC:** 70.3 **Fert. Level:** High

Overall Moisture Conditions: NORMAL
Closest Weather Station: OARDC **Distance:** 2 **Unit:** MI

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID:	MYCOHERBW2011	Study Dir.:	Doug Doohan, Tim Koch
Location:	Willard, Ohio	Investigator:	Dr. Douglas J. Doohan

APPLICATION DESCRIPTION

	A
Application Date:	5/11/2011
Time of Day:	10-11 AM
Application Method:	SPRAY
Application Timing:	PRE
Applic. Placement:	BRODIR
Air Temp., Unit:	75.7 F
% Relative Humidity:	64
Wind Velocity, Unit:	2.9 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	63.1 F
Soil Moisture:	ADEQUATE
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	NONE

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	RORPA
Density, Unit:	. .

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	TT JET
Nozzle Size:	11002VP
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	4
Band Width, Unit:	6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.65 MPH
Carrier:	H2O
Spray Volume, Unit:	25 GPA
Propellant:	CO2

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 6 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1471)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	DUAL MAGNUM	7.64	L	1.27	lb ai/a	PRE	A	13.3 ml/mx	102	213	301	404
3	GOALTENDER	4	L	0.5	lb ai/a	PRE	A	9.999 ml/mx	103	202	310	412
4	OUTLOOK	6	L	0.98	lb ai/a	PRE	A	13.07 ml/mx	104	201	313	407
5	SANDEA	75	DF	0.047	lb ai/a	PRE	A	0.6007 g/mx	105	207	312	401
6	SENCOR	75	DF	1	lb ai/a	PRE	A	12.78 g/mx	106	203	305	403
7	NORTRON	4	L	1	lb ai/a	PRE	A	20.0 ml/mx	107	204	303	402
8	LOROX	50	WP	1.5	lb ai/a	PRE	A	28.76 g/mx	108	209	304	406
9	PROWL H2O	3.8	L	1.9	lb ai/a	PRE	A	40.0 ml/mx	109	208	311	409
10	SPARTAN	4	L	0.187	lb ai/a	PRE	A	3.74 ml/mx	110	212	302	408
11	COMMAND	3	ME	0.375	lb ai/a	PRE	A	9.999 ml/mx	111	206	308	413
12	CHATEAU	51	WDG	0.032	lb ai/a	PRE	A	0.6015 g/mx	112	211	309	410

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 6 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1471)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	210	307	411

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
16.621	ml	DUAL MAGNUM	7.64	L	
12.499	ml	GOALTENDER	4	L	
16.332	ml	OUTLOOK	6	L	
0.751	g	SANDEA	75	DF	
15.977	g	SENCOR	75	DF	
24.997	ml	NORTRON	4	L	
35.948	g	LOROX	50	WP	
49.995	ml	PROWL H2O	3.8	L	
4.674	ml	SPARTAN	4	L	
12.499	ml	COMMAND	3	ME	
0.752	g	CHATEAU	51	WDG	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	5	402	7	403	6	404	2			406	8	407	4	408	10	409	9	410	12
3	3	301	2	302	10	303	7	304	8	305	6			307	1	308	11	309	12	310	3
2	2	201	4	202	3	203	6	204	7			206	11	207	5	208	9	209	8	210	1
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk						
4	4	411	1	412	3	413	11
3	3	311	9	312	5	313	4
2	2	211	12	212	10	213	2
1	1	111	11	112	12		

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					RORPA	RORPA	RORPA	AMABL	GASCI	POROL	POLPY	AMABL	GASCI	POROL	POLPY
Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%	%
Rating Date					6/1/2011	6/15/2011	6/29/2011	6/1/2011	6/1/2011	6/1/2011	6/1/2011	6/15/2011	6/15/2011	6/15/2011	6/15/2011
Trt-Eval Interval					3 WAT	5 WAT	7WAT	3 WAT	3 WAT	3 WAT	3 WAT	5 WAT	5 WAT	5 WAT	5 WAT
# Subsamples, Dec.					0 0	- 0	- 0								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
1	UNTREATED CONTROL				101	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					210	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					411	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	DUAL MAGNUM	1.27	lb ai/a	A	102	10	0	0	0.0	0.0	0.0	60.0	99.0	0.0	0.0	30.0
					213	0	0	0	0.0	0.0	0.0	10.0	99.0	0.0	0.0	0.0
					301	30	0	0	30.0	30.0	30.0	60.0	0.0	0.0	0.0	0.0
					404	25	0	0	99.0	99.0	99.0	50.0	95.0	0.0	10.0	0.0
					Mean =	16	0	0	32.3	32.3	32.3	45.0	73.3	0.0	2.5	7.5
3	GOALTENDER	0.5	lb ai/a	A	103	0	0	0	99.0	0.0	99.0	90.0	0.0	0.0	0.0	70.0
					202	5	0	0	80.0	80.0	80.0	80.0	0.0	0.0	0.0	70.0
					310	0	0	0	90.0	99.0	90.0	85.0	0.0	0.0	0.0	30.0
					412	0	0	0	80.0	80.0	80.0	50.0	99.0	99.0	80.0	20.0
					Mean =	1	0	0	87.3	64.8	87.3	76.3	24.8	24.8	20.0	47.5
4	OUTLOOK	0.98	lb ai/a	A	104	90	20	10	90.0	90.0	99.0	90.0	99.0	99.0	99.0	80.0
					201	80	10	0	80.0	80.0	80.0	80.0	99.0	99.0	0.0	65.0
					313	85	0	0	99.0	99.0	99.0	99.0	99.0	99.0	85.0	80.0
					407	75	15	0	99.0	99.0	99.0	90.0	99.0	99.0	90.0	15.0
					Mean =	83	11	3	92.0	92.0	94.3	89.8	99.0	99.0	68.5	60.0
5	SANDEA	0.047	lb ai/a	A	105	90	70	80	90.0	90.0	0.0	90.0	0.0	99.0	0.0	50.0
					207	80	99	85	80.0	80.0	80.0	80.0	0.0	99.0	0.0	75.0
					312	90	80	75	90.0	90.0	90.0	90.0	0.0	99.0	0.0	30.0
					401	95	90	85	99.0	99.0	0.0	80.0	0.0	99.0	0.0	60.0
					Mean =	89	85	81	89.8	89.8	42.5	85.0	0.0	99.0	0.0	53.8
6	SENCOR	1	lb ai/a	A	106	99	99	99	99.0	99.0	99.0	99.0	99.0	99.0	85.0	99.0
					203	100	99	99	99.0	99.0	99.0	99.0	99.0	99.0	95.0	99.0
					305	100	99	99	99.0	99.0	99.0	99.0	99.0	99.0	85.0	99.0
					403	100	99	99	95.0	95.0	95.0	95.0	99.0	99.0	90.0	99.0
					Mean =	100	99	99	98.0	98.0	98.0	98.0	99.0	99.0	88.8	99.0

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MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					RORPA	RORPA	RORPA	AMABL	GASCI	POROL	POLPY	AMABL	GASCI	POROL	POLPY
Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%	%
Rating Date					6/1/2011	6/15/2011	6/29/2011	6/1/2011	6/1/2011	6/1/2011	6/1/2011	6/15/2011	6/15/2011	6/15/2011	6/15/2011
Trt-Eval Interval					3 WAT	5 WAT	7WAT	3 WAT	3 WAT	3 WAT	3 WAT	5 WAT	5 WAT	5 WAT	5 WAT
# Subsamples, Dec.					0 0	- 0	- 0								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
7	NORTRON	1	lb ai/a	A	107	0	0	0	99.0	99.0	99.0	60.0	0.0	0.0	85.0	0.0
					204	0	0	0	0.0	0.0	0.0	0.0	99.0	99.0	90.0	0.0
					303	0	0	0	0.0	0.0	0.0	0.0	10.0	30.0	90.0	0.0
					402	0	0	0	0.0	0.0	0.0	0.0	99.0	99.0	80.0	0.0
					Mean =	0	0	0	24.8	24.8	24.8	15.0	52.0	57.0	86.3	0.0
8	LOROX	1.5	lb ai/a	A	108	30	85	0	99.0	99.0	0.0	30.0	0.0	90.0	85.0	0.0
					209	0	80	0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0
					304	0	50	0	0.0	0.0	0.0	0.0	50.0	99.0	0.0	0.0
					406	15	75	0	99.0	99.0	99.0	0.0	10.0	0.0	0.0	0.0
					Mean =	11	73	0	49.5	49.5	24.8	7.5	15.0	52.3	21.3	0.0
9	PROWL H2O	1.9	lb ai/a	A	109	0	0	0	0.0	0.0	0.0	15.0	90.0	0.0	90.0	0.0
					208	0	0	0	0.0	0.0	0.0	0.0	99.0	0.0	0.0	0.0
					311	0	0	0	0.0	0.0	0.0	0.0	99.0	0.0	0.0	0.0
					409	0	0	0	0.0	0.0	99.0	50.0	80.0	0.0	80.0	0.0
					Mean =	0	0	0	0.0	0.0	24.8	16.3	92.0	0.0	42.5	0.0
10	SPARTAN	0.187	lb ai/a	A	110	15	0	0	99.0	99.0	99.0	15.0	0.0	0.0	0.0	0.0
					212	15	0	0	15.0	15.0	15.0	10.0	99.0	0.0	85.0	20.0
					302	0	0	0	0.0	0.0	0.0	70.0	0.0	0.0	0.0	20.0
					408	0	0	0	99.0	99.0	99.0	50.0	10.0	0.0	85.0	0.0
					Mean =	8	0	0	53.3	53.3	53.3	36.3	27.3	0.0	42.5	10.0
11	COMMAND	0.375	lb ai/a	A	111	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					206	0	0	0	0.0	0.0	0.0	0.0	20.0	20.0	50.0	30.0
					308	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	10.0
					413	0	0	0	0.0	0.0	0.0	0.0	99.0	99.0	85.0	0.0
					Mean =	0	0	0	0.0	0.0	0.0	0.0	29.8	29.8	53.8	10.0
12	CHATEAU	0.032	lb ai/a	A	112	80	70	30	99.0	40.0	90.0	70.0	50.0	0.0	0.0	40.0
					211	60	50	40	30.0	30.0	30.0	30.0	99.0	0.0	0.0	25.0
					309	75	60	35	0.0	0.0	0.0	50.0	90.0	0.0	0.0	10.0
					410	75	65	40	99.0	99.0	99.0	0.0	0.0	99.0	90.0	0.0
					Mean =	73	61	36	57.0	42.3	54.8	37.5	59.8	24.8	22.5	18.8

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17
	Weed Code					DIGSA	AMABL	GASCI	POROL	POLPY	DIGSA
	Crop Code					NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated					WEED	WEED	WEED	WEED	WEED	WEED
	Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%
	Rating Date					6/15/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
	Trt-Eval Interval					5 WAT	7WAT	7WAT	7WAT	7WAT	7WAT
	# Subsamples, Dec.										
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0
					210	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2	DUAL MAGNUM	1.27	lb ai/a	A	102	99.0	0.0	0.0	0.0	0.0	0.0
					213	99.0	99.0	0.0	0.0	0.0	99.0
					301	99.0	0.0	0.0	0.0	0.0	99.0
					404	99.0	99.0	0.0	10.0	0.0	99.0
					Mean =	99.0	49.5	0.0	2.5	0.0	74.3
3	GOALTENDER	0.5	lb ai/a	A	103	99.0	0.0	0.0	0.0	20.0	0.0
					202	0.0	0.0	0.0	0.0	0.0	0.0
					310	0.0	99.0	99.0	0.0	0.0	99.0
					412	0.0	99.0	99.0	80.0	0.0	99.0
					Mean =	24.8	49.5	49.5	20.0	5.0	49.5
4	OUTLOOK	0.98	lb ai/a	A	104	99.0	99.0	99.0	99.0	70.0	99.0
					201	99.0	0.0	99.0	0.0	0.0	99.0
					313	99.0	90.0	99.0	85.0	60.0	99.0
					407	95.0	99.0	99.0	90.0	50.0	99.0
					Mean =	98.0	72.0	99.0	68.5	45.0	99.0
5	SANDEA	0.047	lb ai/a	A	105	0.0	99.0	99.0	0.0	50.0	0.0
					207	0.0	0.0	99.0	0.0	0.0	0.0
					312	0.0	99.0	99.0	0.0	0.0	0.0
					401	0.0	99.0	99.0	0.0	0.0	99.0
					Mean =	0.0	74.3	99.0	0.0	12.5	24.8
6	SENCOR	1	lb ai/a	A	106	95.0	85.0	99.0	85.0	99.0	80.0
					203	98.0	80.0	99.0	95.0	99.0	85.0
					305	99.0	90.0	99.0	85.0	99.0	90.0
					403	90.0	90.0	99.0	90.0	99.0	80.0
					Mean =	95.5	86.3	99.0	88.8	99.0	83.8

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					DIGSA	AMABL	GASCI	POROL	POLPY	DIGSA
Crop Code					NONE	NONE	NONE	NONE	NONE	NONE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%
Rating Date					6/15/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
Trt-Eval Interval					5 WAT	7WAT	7WAT	7WAT	7WAT	7WAT
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17
7	NORTRON	1	lb ai/a	A	107	90.0	99.0	0.0	85.0	0.0	99.0
					204	99.0	99.0	99.0	90.0	0.0	99.0
					303	0.0	99.0	0.0	90.0	0.0	0.0
					402	99.0	99.0	0.0	80.0	0.0	0.0
					Mean =	72.0	99.0	24.8	86.3	0.0	49.5
8	LOROX	1.5	lb ai/a	A	108	0.0	0.0	0.0	85.0	0.0	0.0
					209	0.0	99.0	50.0	0.0	0.0	99.0
					304	40.0	99.0	0.0	0.0	0.0	0.0
					406	0.0	99.0	0.0	0.0	0.0	99.0
					Mean =	10.0	74.3	12.5	21.3	0.0	49.5
9	PROWL H2O	1.9	lb ai/a	A	109	99.0	99.0	0.0	90.0	0.0	99.0
					208	99.0	0.0	0.0	0.0	0.0	99.0
					311	99.0	99.0	50.0	0.0	0.0	99.0
					409	99.0	0.0	0.0	80.0	0.0	99.0
					Mean =	99.0	49.5	12.5	42.5	0.0	99.0
10	SPARTAN	0.187	lb ai/a	A	110	0.0	99.0	50.0	0.0	0.0	99.0
					212	99.0	99.0	0.0	85.0	0.0	99.0
					302	0.0	99.0	0.0	0.0	0.0	99.0
					408	0.0	99.0	0.0	85.0	0.0	99.0
					Mean =	24.8	99.0	12.5	42.5	0.0	99.0
11	COMMAND	0.375	lb ai/a	A	111	0.0	0.0	0.0	0.0	0.0	99.0
					206	0.0	99.0	0.0	50.0	0.0	99.0
					308	0.0	99.0	0.0	80.0	0.0	0.0
					413	99.0	99.0	99.0	85.0	0.0	99.0
					Mean =	24.8	74.3	24.8	53.8	0.0	74.3
12	CHATEAU	0.032	lb ai/a	A	112	0.0	0.0	0.0	0.0	50.0	0.0
					211	0.0	70.0	0.0	0.0	0.0	99.0
					309	0.0	99.0	0.0	0.0	0.0	99.0
					410	0.0	99.0	99.0	90.0	0.0	99.0
					Mean =	0.0	67.0	24.8	22.5	12.5	74.3

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID:	MYCOHERBW2011	Study Dir.:	Doug Doohan, Tim Koch
Location:	Willard, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
RORPA = Rorippa palustris
AMABL = Amaranthus blitoides
GASCI = Galinsoga quadriradiata
POROL = Portulaca oleracea
POLPY = Persicaria pensylvanica
DIGSA = Digitaria sanguinalis
Rating Unit
% = PERCENT

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11	12
	Weed Code				RORPA	RORPA	RORPA	AMABL	GASCI	POROL	POLPY	AMABL	GASCI	POROL	POLPY	DIGSA
	Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%	%
	Rating Date				6/1/2011	6/15/2011	6/29/2011	6/1/2011	6/1/2011	6/1/2011	6/1/2011	6/15/2011	6/15/2011	6/15/2011	6/15/2011	6/15/2011
	Trt-Eval Interval				3 WAT	5 WAT	7WAT	3 WAT	3 WAT	3 WAT	3 WAT	5 WAT	5 WAT	5 WAT	5 WAT	5 WAT
	# Subsamples, Dec.				0 0	- 0	- 0									
1	UNTREATED CONTROL				0 d	0 e	0 d	0.0 c	0.0 b	0.0 b	0.0 c	0.0 c	0.0 b	0.0 b	0.0 c	0.0 c
2	DUAL MAGNUM	1.27	lb ai/a	A	16 d	0 e	0 d	32.3 abc	32.3 ab	32.3 ab	45.0 b	73.3 abc	0.0 b	2.5 b	7.5 c	99.0 a
3	GOALTENDER	0.5	lb ai/a	A	1 d	0 e	0 d	87.3 ab	64.8 ab	87.3 a	76.3 a	24.8 abc	24.8 b	20.0 ab	47.5 b	24.8 bc
4	OUTLOOK	0.98	lb ai/a	A	83 bc	11 e	3 d	92.0 ab	92.0 a	94.3 a	89.8 a	99.0 a	99.0 a	68.5 ab	60.0 b	98.0 a
5	SANDEA	0.047	lb ai/a	A	89 b	85 b	81 b	89.8 ab	89.8 a	42.5 ab	85.0 a	0.0 c	99.0 a	0.0 b	53.8 b	0.0 c
6	SENCOR	1	lb ai/a	A	100 a	99 a	99 a	98.0 a	98.0 a	98.0 a	98.0 a	99.0 a	99.0 a	88.8 a	99.0 a	95.5 a
7	NORTRON	1	lb ai/a	A	0 d	0 e	0 d	24.8 bc	24.8 ab	24.8 ab	15.0 bc	52.0 abc	57.0 ab	86.3 a	0.0 c	72.0 ab
8	LOROX	1.5	lb ai/a	A	11 d	73 c	0 d	49.5 abc	49.5 ab	24.8 ab	7.5 bc	15.0 bc	52.3 ab	21.3 ab	0.0 c	10.0 c
9	PROWL H2O	1.9	lb ai/a	A	0 d	0 e	0 d	0.0 c	0.0 b	24.8 ab	16.3 bc	92.0 ab	0.0 b	42.5 ab	0.0 c	99.0 a
10	SPARTAN	0.187	lb ai/a	A	8 d	0 e	0 d	53.3 abc	53.3 ab	53.3 ab	36.3 bc	27.3 abc	0.0 b	42.5 ab	10.0 c	24.8 bc
11	COMMAND	0.375	lb ai/a	A	0 d	0 e	0 d	0.0 c	0.0 b	0.0 b	0.0 c	29.8 abc	29.8 b	53.8 ab	10.0 c	24.8 bc
12	CHATEAU	0.032	lb ai/a	A	73 c	61 d	36 c	57.0 abc	42.3 ab	54.8 ab	37.5 bc	59.8 abc	24.8 b	22.5 ab	18.8 c	0.0 c
	LSD (P=.05)				10.3	9.6	3.6	42.51	47.35	52.53	25.90	49.91	44.51	46.83	20.49	42.72
	Standard Deviation				7.1	6.6	2.5	29.44	32.79	36.38	17.94	34.56	30.82	32.43	14.19	29.58
	CV				22.47	24.24	13.49	60.51	72.0	81.38	42.5	72.54	76.19	86.78	55.55	64.81
	Bartlett's X2				22.124	1.542	0.007	33.59	27.83	26.484	21.091	8.131	0.013	27.168	4.209	27.032
	P(Bartlett's X2)				0.002*	0.673	0.996	0.001*	0.001*	0.002*	0.012*	0.321	1.00	0.001*	0.648	0.001*
	Replicate F				1.527	1.342	0.688	4.529	2.519	2.018	2.619	1.573	1.718	2.288	3.218	0.531
	Replicate Prob(F)				0.2257	0.2776	0.5661	0.0091	0.0750	0.1304	0.0672	0.2144	0.1824	0.0968	0.0352	0.6639
	Treatment F				131.718	141.060	823.568	6.515	4.786	3.470	16.509	4.544	6.832	3.841	20.456	8.494
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0002	0.0027	0.0001	0.0003	0.0001	0.0013	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCOHERBW2011 Study Dir.: Doug Doohan, Tim Koch
Location: Willard, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	AMABL	GASCI	POROL	POLPY	DIGSA
	Weed Code				AMABL	GASCI	POROL	POLPY	DIGSA
	Crop Code				NONE	NONE	NONE	NONE	NONE
	Part Rated				WEED	WEED	WEED	WEED	WEED
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%
	Rating Date				6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011
	Trt-Eval Interval				7WAT	7WAT	7WAT	7WAT	7WAT
	# Subsamples, Dec.								
					13	14	15	16	17
1	UNTREATED CONTROL				0.0 a	0.0 b	0.0 b	0.0 c	0.0 b
2	DUAL MAGNUM	1.27	lb ai/a	A	49.5 a	0.0 b	2.5 b	0.0 c	74.3 ab
3	GOALTENDER	0.5	lb ai/a	A	49.5 a	49.5 ab	20.0 ab	5.0 c	49.5 ab
4	OUTLOOK	0.98	lb ai/a	A	72.0 a	99.0 a	68.5 ab	45.0 b	99.0 a
5	SANDEA	0.047	lb ai/a	A	74.3 a	99.0 a	0.0 b	12.5 c	24.8 ab
6	SENCOR	1	lb ai/a	A	86.3 a	99.0 a	88.8 a	99.0 a	83.8 ab
7	NORTRON	1	lb ai/a	A	99.0 a	24.8 b	86.3 a	0.0 c	49.5 ab
8	LOROX	1.5	lb ai/a	A	74.3 a	12.5 b	21.3 ab	0.0 c	49.5 ab
9	PROWL H2O	1.9	lb ai/a	A	49.5 a	12.5 b	42.5 ab	0.0 c	99.0 a
10	SPARTAN	0.187	lb ai/a	A	99.0 a	12.5 b	42.5 ab	0.0 c	99.0 a
11	COMMAND	0.375	lb ai/a	A	74.3 a	24.8 b	53.8 ab	0.0 c	74.3 ab
12	CHATEAU	0.032	lb ai/a	A	67.0 a	24.8 b	22.5 ab	12.5 c	74.3 ab
	LSD (P=.05)				58.31	46.95	46.83	18.31	56.64
	Standard Deviation				40.38	32.51	32.43	12.68	39.23
	CV				60.99	85.14	86.78	87.47	60.6
	Bartlett's X2				10.602	4.492	27.168	3.166	10.677
	P(Bartlett's X2)				0.225	0.61	0.001*	0.367	0.153
	Replicate F				2.294	0.817	2.288	3.402	1.752
	Replicate Prob(F)				0.0961	0.4936	0.0968	0.0290	0.1755
	Treatment F				1.784	5.731	3.841	21.793	2.514
	Treatment Prob(F)				0.0977	0.0001	0.0013	0.0001	0.0200

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID:	MYCOHERBW2011	Study Dir.:	Doug Doohan, Tim Koch
Location:	Willard, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
RORPA = Rorippa palustris
AMABL = Amaranthus blitoides
GASCI = Galinsoga quadriradiata
POROL = Portulaca oleracea
POLPY = Persicaria pensylvanica
DIGSA = Digitaria sanguinalis
Rating Unit
% = PERCENT

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Investigator: Doug Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: M multi-year/interim **Trial Reliability:** RELIABLE
Initiation Date: 5/24/2011 **Planned Completion Date:** 10/30/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
The trial has 2 objectives: 1) Efficacy of 2 aminocyclopyrachlor products at 2 rates each.

2) Crop safety of aminocyclopyrachlor products.

This trial was located in a hilly area that years ago was a pasture, with good multiflora rose pressure.

The "crop" was pasture grass species consisting of orchardgrass, timothy, and velvetgrass. There was some tall fescue present but was only in rep 1, not consistently through the trial.

The "target weed "is **multiflora rose, sprayed before bloom.**

Crop Injury and weed control were assessed visually. The 0-100 linear scale was used , in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Conclusions:

Crop Injury: Results indicate early (#30 days after treatment) significant stunt injury to orchardgrass, with all sprayed treatments (except Crossbow), from 30% to 52%. This injury dissipated over time except for the RDQ treatments

which were still visible but not significant.

Similiar early injury was also seen on timothy, with all sprayed treatments (except Crossbow). The two RDQ treatments showed signifcant stunt, 43% with the low rate and 97% with the high rate, each significantly different fro e
other. There was no visual injury to velvetgrass.

As mentioned above, tall fescue was present in rep 1, but absent in the other reps, and was dropped as a rated species. However , in rep 1 the two RDQ treatments each had 80% injury at 30DAT and 95% injury at 60

suggesting potential injury timothy and tall fescue with RDQ at the tested rates. The trial will be rated late May of 2012 to further evaluate the trial.

Multiflora rose control:

All sprayed treatments provided excellent control; there was no significant differences between treatments.

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Research Associate
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 33-=466-4023

Cooperator/Landowner

Cooperator: Lynn Ault **Role:** Farm Manager
Organization: OARDC/ The Ohio Sate University **Org. Type:** Research
Address 1: Schaffter Farm OARDC
Phone No.: 330-262-3178
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-2440
Postal Code: 44691 **E-mail:** ault.2@osu.edu
Country: USA United States

Other Personnel

Role	Name
Research Assiate	Tim Koch

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Crop Description

Crop 1: YNIGF Grassland not used in agric. Grassland not used in agric.
Variety: variety of pasture grasses **Description:** 1-3' tall
Seed Bed: COMPAC compacted

Pest Description

Pest 1 Type: W **Code:** ACHDI Achillea distans
Common Name: Tansyleaf milfoil
Description: 8-18" in bloom

Pest 2 Type: W **Code:** ASTPI Symphyotrichum pilosum
Common Name: White heath aster
Description: 12-15" vegetative stage

Pest 3 Type: W **Code:** DACGL Dactylis glomerata
Common Name: Orchard grass
Description: 1-3' in bloom

Pest 4 Type: W **Code:** DAUCA Daucus carota
Common Name: Wild carrot
Description: 10-18" vegetative stage

Pest 5 Type: W **Code:** GLEHE Glechoma hederacea
Common Name: Ground ivy
Description: 8-10" in bloom

Pest 6 Type: W **Code:** HOLLA Holcus lanatus
Common Name: Common velvet grass
Description: 1' in bloom

Pest 7 Type: W **Code:** PHLPR Phleum pratense
Common Name: timothy
Description: 1-3' in bloom

Pest 8 Type: W **Code:** ROSMU Rosa multiflora
Common Name: Multiflora rose
Description: 1-3' pre-bloom

Pest 9 Type: W **Code:** SOOCA Solidago canadensis
Common Name: Canadian goldenrod
Description: 1-2', vegetative stage

Pest10 Type: W **Code:** TRFPR Trifolium pratense
Common Name: Red clover
Description: 6-8", vegetative stage

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Site and Design

Plot Width, Unit: 5 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 125 FT2
Replications: 3
Site Type: PASTUR pasture
Experimental Unit: 1 PLOT plot
Tillage Type: NONE conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Field Prep./Maintenance:
NONE

Soil Description

Description Name: HILLY (OLD PASTURE SITE)
% Sand: 11 **% OM:** 2.0 **Texture:** SIL silt loam
% Silt: 75 **pH:** 4.97 **Soil Name:** CANFIELD SILT LOAM
% Clay: 14 **CEC:** 13.9 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 2 MI

Application Description

	A
Application Date:	5/24/2011
Time of Day:	9-10 AM
Application Method:	SPRAY
Application Timing:	PRE-BLOOM
Application Placement:	BROADCAST
Applied By:	TIM KOCH
Air Temperature, Unit:	66.1 F
% Relative Humidity:	83.4
Wind Velocity, Unit:	3.6 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	73 F
Soil Moisture:	SLIWET
% Cloud Cover:	50
Next Rain Occurred On:	5/24/2011

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	YNIGF
Height, Unit:	36 IN
Height Minimum, Maximum:	12

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ACHDI W BBCH
IN	
Height Minimum, Maximum:	8 15
Density, Unit:	1 PLA/m2
Pest 2 Code, Type, Scale:	ASTPI W BBCH
IN	
Height Minimum, Maximum:	6 8
Density, Unit:	1 PLA/m2
Pest 3 Code, Type, Scale:	DACGL W BBCH
FT	
Height Minimum, Maximum:	1 3
Density, Unit:	1 PLA/m2
Pest 4 Code, Type, Scale:	DAUCA W BBCH
IN	
Height Minimum, Maximum:	10 18
Density, Unit:	1 PLA/m2
Pest 5 Code, Type, Scale:	GLEHE W
Height, Unit:	12 IN
Density, Unit:	5 PLA/m2
Pest 6 Code, Type, Scale:	HOLLA W BBCH
IN	
Height Minimum, Maximum:	10 15
Density, Unit:	10 PLA/m2
Pest 7 Code, Type, Scale:	PHLPR W BBCH
FT	
Height Minimum, Maximum:	1 3
Density, Unit:	3 PLA/m2
Pest 8 Code, Type, Scale:	ROSMU W BBCH
FT	

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MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Height Minimum, Maximum:	1 3
Density, Unit:	2 PLA/m2
Pest 9 Code, Type, Scale:	SOOCA W BBCH
IN	
Height Minimum, Maximum:	24 30
Density, Unit:	1 M2
Pest10 Code, Type, Scale:	TRFPR W BBCH
IN	
Height Minimum, Maximum:	6 8
Density, Unit:	1 PLA/m2

Application Equipment

	A
Appl. Equipment:	THE
Equipment Type:	BACKPA
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TTJET
Nozzle Size:	11002VP
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	WATER
Spray Volume, Unit:	25 gal/ac
Mix Size, Unit:	2 liters
Propellant:	CO2

Equipment Comment: The nozzle type was a TeeJet Turbo Twin Jet twin flat spray tip.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: A Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .89617)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
2	MAT 28+	2.0	LB/GAL	SL	1.0	oz ai/a	POST	A	2.5 ml/mx	102	202	304
	2, 4-D AMINE+	3.80		SL	7.6	oz ai/a	POST	A	9.999 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
3	MAT 28+	2.0	LB/GAL	SL	2.0	oz ai/a	POST	A	4.999 ml/mx	103	205	306
	2, 4-D AMINE+	3.80		SL	15.20	oz ai/a	POST	A	20.0 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
4	RDQ98+	51		WG	0.08	lb ai/a	POST	A	1.504 g/mx	104	204	301
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
5	RDQ98+	51		WG	0.128	lb ai/a	POST	A	2.406 g/mx	105	203	305
	NIS	1.00		SL	0.25	% v/v	POST	A	4.999 ml/mx			
6	CROSSBOW	3		L	4.5	lb ai/a	POST	A	120.0 ml/mx	106	201	303

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .89617)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
1	UNTREATED CONTROL									101	206	302

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
9.374	ml	MAT 28+	2.0	SL	
37.496	ml	2, 4-D AMINE+	3.80	SL	
24.997	ml	NIS	1.00	SL	
4.887	g	RDQ98+	51	WG	
149.984	ml	CROSSBOW	3	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 566/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Rep	Blk												
	4												
3	3	301	4	302	1	303	6	304	2	305	5	306	3
2	2	201	6	202	2	203	5	204	4	205	3	206	1
1	1	101	1	102	2	103	3	104	4	105	5	106	6

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MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				ASTPI	TRFPR	GLEHE	SOOCA	ROSMU	DACGL	ACHDI	PHLPR
Pest Scientific Name				Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>	Rosa multiflora	Dactylis glome>	Achillea dista>	Phleum pratense
Pest Name				WHaster	Rclover	Givy	Cgoldenrod	MFrose	Orchard grass	T milfoil	Timothy
Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	CROP -	WEED -	CROP -
Rating Date				6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	INJURY
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				31 31	31 31	31 31	31 31	31 31	31 31	31 31	31 31
Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	MAT 28+	1.0	oz ai/a	A	102	85.0	99.0	99.0	99.0	100.0	30.0	99.0	0.0
	2, 4-D AMINE+	7.6	oz ai/a	A	202	80.0	99.0	99.0	99.0	100.0	0.0	70.0	20.0
	NIS	0.25	% v/v	A	304	99.0	99.0	99.0	99.0	30.0	60.0	95.0	50.0
					Mean =	88.0	99.0	99.0	99.0	76.7	30.0	88.0	23.3
3	MAT 28+	2.0	oz ai/a	A	103	99.0	99.0	99.0	99.0	100.0	60.0	99.0	0.0
	2, 4-D AMINE+	15.20	oz ai/a	A	205	99.0	99.0	99.0	99.0	75.0	35.0	99.0	20.0
	NIS	0.25	% v/v	A	306	99.0	99.0	99.0	99.0	85.0	60.0	50.0	50.0
					Mean =	99.0	99.0	99.0	99.0	86.7	51.7	82.7	23.3
4	RDQ98+	0.08	lb ai/a	A	104	99.0	99.0	50.0	85.0	30.0	40.0	85.0	30.0
	NIS	0.25	% v/v	A	204	99.0	99.0	99.0	85.0	85.0	40.0	85.0	30.0
					301	99.0	99.0	99.0	85.0	60.0	50.0	99.0	30.0
					Mean =	99.0	99.0	82.7	85.0	58.3	43.3	89.7	30.0
5	RDQ98+	0.128	lb ai/a	A	105	99.0	99.0	70.0	85.0	40.0	50.0	85.0	30.0
	NIS	0.25	% v/v	A	203	99.0	99.0	99.0	90.0	30.0	40.0	99.0	30.0
					305	99.0	99.0	99.0	99.0	90.0	30.0	85.0	30.0
					Mean =	99.0	99.0	89.3	91.3	53.3	40.0	89.7	30.0
6	CROSSBOW	4.5	lb ai/a	A	106	99.0	99.0	80.0	99.0	90.0	0.0	60.0	0.0
					201	99.0	99.0	99.0	99.0	100.0	0.0	70.0	0.0
					303	99.0	99.0	99.0	99.0	100.0	0.0	95.0	0.0
					Mean =	99.0	99.0	92.7	99.0	96.7	0.0	75.0	0.0

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	9	10	11	12	13	14	15	16
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					HOLLA	DAUCA	ASTPI	TRFPR	GLEHE	SOOCA	ROSMU	DACGL
	Pest Scientific Name					Holcus lanatus	Daucus carota	Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>	Rosa multiflora	Dactylis glome>
	Pest Name					velvet grass	Wild carrot	WHaster	Rclover	G ivy	Cgoldenrod	MFrose	Orchard grass
	Crop Code					YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated					CROP -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	CROP -
	Rating Date					6/24/2011	6/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
	Rating Type					INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY
	Rating Unit					%	%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0	0
	Days After First/Last Applic.					31 31	31 31	61 61	61 61	61 61	61 61	61 61	61 61
	Trt-Eval Interval					30DAT	30DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	MAT 28+	1.0	oz ai/a	A	102	0.0	99.0	99.0	99.0	99.0	99.0	80.0	0.0
	2, 4-D AMINE+	7.6	oz ai/a	A	202	0.0	85.0	99.0	99.0	99.0	99.0	80.0	0.0
	NIS	0.25	% v/v	A	304	0.0	99.0	99.0	99.0	99.0	99.0	50.0	0.0
					Mean =	0.0	94.3	99.0	99.0	99.0	99.0	70.0	0.0
3	MAT 28+	2.0	oz ai/a	A	103	0.0	99.0	99.0	99.0	99.0	99.0	85.0	0.0
	2, 4-D AMINE+	15.20	oz ai/a	A	205	0.0	95.0	99.0	99.0	99.0	99.0	80.0	0.0
	NIS	0.25	% v/v	A	306	0.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0
					Mean =	0.0	97.7	99.0	99.0	99.0	99.0	88.0	0.0
4	RDQ98+	0.08	lb ai/a	A	104	0.0	99.0	99.0	99.0	99.0	99.0	90.0	0.0
	NIS	0.25	% v/v	A	204	0.0	85.0	99.0	99.0	99.0	99.0	99.0	30.0
					301	0.0	99.0	99.0	99.0	99.0	99.0	80.0	0.0
					Mean =	0.0	94.3	99.0	99.0	99.0	99.0	89.7	10.0
5	RDQ98+	0.128	lb ai/a	A	105	0.0	99.0	99.0	99.0	99.0	99.0	85.0	0.0
	NIS	0.25	% v/v	A	203	0.0	90.0	99.0	99.0	99.0	99.0	99.0	0.0
					305	0.0	99.0	99.0	99.0	99.0	99.0	99.0	0.0
					Mean =	0.0	96.0	99.0	99.0	99.0	99.0	94.3	0.0
6	CROSSBOW	4.5	lb ai/a	A	106	0.0	0.0	99.0	99.0	99.0	99.0	85.0	0.0
					201	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0
					303	0.0	0.0	99.0	99.0	99.0	99.0	99.0	0.0
					Mean =	0.0	0.0	99.0	99.0	99.0	99.0	94.3	0.0

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	17	18	19	20	21	22	23	24
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					ACHDI	PHLPR	HOLLA	DAUCA	ASTPI	TRFPR	GLEHE	SOOCA
	Pest Scientific Name					Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota	Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>
	Pest Name					Tmilfoil	Timothy	velvet grass	Wild carrot	WHaster	Rclover	Givy	Cgoldenrod
	Crop Code					YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated					WEED -	CROP -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					7/24/2011	7/24/2011	7/24/2011	7/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
	Rating Type					CONTROL	INJURY	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0	0
	Days After First/Last Applic.					61 61	61 61	61 61	61 61	92 92	92 92	92 92	92 92
	Trt-Eval Interval					60DAT	60DAT	60DAT	60DAT	90DAT	90DAT	90DAT	90DAT
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	MAT 28+	1.0	oz ai/a	A	102	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	2, 4-D AMINE+	7.6	oz ai/a	A	202	99.0	0.0	0.0	90.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	A	304	99.0	0.0	0.0	99.0	85.0	99.0	99.0	99.0
					Mean =	99.0	0.0	0.0	96.0	94.3	99.0	99.0	99.0
3	MAT 28+	2.0	oz ai/a	A	103	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	2, 4-D AMINE+	15.20	oz ai/a	A	205	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	A	306	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	99.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
4	RDQ98+	0.08	lb ai/a	A	104	99.0	30.0	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	A	204	99.0	50.0	0.0	95.0	99.0	99.0	99.0	99.0
					301	99.0	50.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	99.0	43.3	0.0	97.7	99.0	99.0	99.0	99.0
5	RDQ98+	0.128	lb ai/a	A	105	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	A	203	99.0	95.0	0.0	99.0	45.0	99.0	99.0	99.0
					305	99.0	99.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	99.0	97.7	0.0	99.0	81.0	99.0	99.0	99.0
6	CROSSBOW	4.5	lb ai/a	A	106	85.0	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					201	10.0	0.0	0.0	40.0	99.0	99.0	99.0	99.0
					303	50.0	0.0	0.0	50.0	99.0	99.0	99.0	99.0
					Mean =	48.3	0.0	0.0	63.0	99.0	99.0	99.0	99.0

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	25	26	27	28	29	30
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					ROSMU	DACGL	ACHDI	PHLPR	HOLLA	DAUCA
	Pest Scientific Name					Rosa multiflora	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota
	Pest Name					MFrose	Orchard grass	T milfoil	Timothy	velvet grass	Wild carrot
	Crop Code					YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated					WEED -	CROP -	WEED -	CROP -	CROP -	WEED -
	Rating Date					8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
	Rating Type					CONTROL	INJURY	CONTROL	INJURY	INJURY	CONTROL
	Rating Unit					%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0
	Days After First/Last Applic.					92 92	92 92	92 92	92 92	92 92	92 92
	Trt-Eval Interval					90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0
					206	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2	MAT 28+	1.0	oz ai/a	A	102	99.0	0.0	99.0	0.0	0.0	99.0
	2, 4-D AMINE+	7.6	oz ai/a	A	202	90.0	0.0	99.0	0.0	0.0	90.0
	NIS	0.25	% v/v	A	304	85.0	0.0	95.0	0.0	0.0	99.0
					Mean =	91.3	0.0	97.7	0.0	0.0	96.0
3	MAT 28+	2.0	oz ai/a	A	103	85.0	0.0	99.0	0.0	0.0	99.0
	2, 4-D AMINE+	15.20	oz ai/a	A	205	80.0	0.0	99.0	0.0	0.0	99.0
	NIS	0.25	% v/v	A	306	95.0	0.0	99.0	0.0	0.0	99.0
					Mean =	86.7	0.0	99.0	0.0	0.0	99.0
4	RDQ98+	0.08	lb ai/a	A	104	95.0	30.0	99.0	0.0	0.0	99.0
	NIS	0.25	% v/v	A	204	99.0	35.0	99.0	0.0	0.0	99.0
					301	60.0	0.0	99.0	0.0	0.0	99.0
					Mean =	84.7	21.7	99.0	0.0	0.0	99.0
5	RDQ98+	0.128	lb ai/a	A	105	99.0	0.0	99.0	0.0	0.0	99.0
	NIS	0.25	% v/v	A	203	80.0	30.0	99.0	0.0	0.0	99.0
					305	99.0	0.0	99.0	0.0	0.0	99.0
					Mean =	92.7	10.0	99.0	0.0	0.0	99.0
6	CROSSBOW	4.5	lb ai/a	A	106	99.0	0.0	99.0	0.0	0.0	99.0
					201	90.0	0.0	90.0	0.0	0.0	60.0
					303	99.0	30.0	90.0	0.0	0.0	99.0
					Mean =	96.0	10.0	93.0	0.0	0.0	86.0

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 566/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ASTPI, Symphyotrichum pilosum, = US
TRFPR, Trifolium pratense, = US
GLEHE, Glechoma hederacea, = US
SOOCA, Solidago canadensis, = US
ROSMU, Rosa multiflora, = US
DACGL, Dactylis glomerata, = US
ACHDI, Achillea distans, = US
PHLPR, Phleum pratense, = US
HOLLA, Holcus lanatus, = US
DAUCA, Daucus carota, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7	8
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				ASTPI	TRFPR	GLEHE	SOOCA	ROSMU	DACGL	ACHDI	PHLPR
	Pest Scientific Name				Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>	Rosa multiflora	Dactylis glome>	Achillea dista>	Phleum pratense
	Pest Name				WHaster	Rclover	Givy	Cgoldenrod	MFrose	Orchard grass	T milfoil	Timothy
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	CROP -	WEED -	CROP -
	Rating Date				6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	INJURY
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				31 31	31 31	31 31	31 31	31 31	31 31	31 31	31 31
	Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
1	UNTREATED CONTROL			A	0.0 c	0.0 b	0.0 b	0.0 d	0.0 b	0.0 b	0.0 b	0.0 a
2	MAT 28+	1.0	oz ai/a	A	88.0 b	99.0 a	99.0 a	99.0 a	76.7 a	30.0 ab	88.0 a	23.3 a
	2, 4-D AMINE+	7.6	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	2.0	oz ai/a	A	99.0 a	99.0 a	99.0 a	99.0 a	86.7 a	51.7 a	82.7 a	23.3 a
	2, 4-D AMINE+	15.20	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.08	lb ai/a	A	99.0 a	99.0 a	82.7 a	85.0 c	58.3 ab	43.3 a	89.7 a	30.0 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.128	lb ai/a	A	99.0 a	99.0 a	89.3 a	91.3 b	53.3 ab	40.0 a	89.7 a	30.0 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	4.5	lb ai/a	A	99.0 a	99.0 a	92.7 a	99.0 a	96.7 a	0.0 b	75.0 a	0.0 a
	LSD (P=.05)				7.31	0.00	21.19	5.27	48.63	24.58	31.53	23.64
	Standard Deviation				4.02	0.00	11.65	2.90	26.73	13.51	17.33	13.00
	CV				4.98	0.0	15.1	3.67	43.16	49.12	24.47	73.1
	Bartlett's X2				0.0	0.0	1.612	0.0	5.961	4.888	3.868	0.0
	P(Bartlett's X2)				.	.	0.447	.	0.202	0.18	0.424	.
	Replicate F				1.000	0.000	3.853	1.000	0.060	1.804	0.004	2.500
	Replicate Prob(F)				0.4019	1.0000	0.0575	0.4019	0.9419	0.2144	0.9961	0.1317
	Treatment F				293.394	0.000	32.405	545.653	5.002	8.251	12.343	3.526
	Treatment Prob(F)				0.0001	1.0000	0.0001	0.0001	0.0149	0.0025	0.0005	0.0426

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011 Protocol ID: # US 566/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12	13	14	15	16
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				HOLLA	DAUCA	ASTPI	TRFPR	GLEHE	SOOCA	ROSMU	DACGL
	Pest Scientific Name				Holcus lanatus	Daucus carota	Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>	Rosa multiflora	Dactylis glome>
	Pest Name				velvet grass	Wild carrot	WHaster	Rclover	G ivy	Cgoldenrod	MFrose	Orchard grass
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				CROP -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	CROP -
	Rating Date				6/24/2011	6/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
	Rating Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				31 31	31 31	61 61	61 61	61 61	61 61	61 61	61 61
	Trt-Eval Interval				30DAT	30DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
1	UNTREATED CONTROL				0.0 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 a
2	MAT 28+	1.0	oz ai/a	A	0.0 a	94.3 a	99.0 a	99.0 a	99.0 a	99.0 a	70.0 a	0.0 a
	2, 4-D AMINE+	7.6	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	2.0	oz ai/a	A	0.0 a	97.7 a	99.0 a	99.0 a	99.0 a	99.0 a	88.0 a	0.0 a
	2, 4-D AMINE+	15.20	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.08	lb ai/a	A	0.0 a	94.3 a	99.0 a	99.0 a	99.0 a	99.0 a	89.7 a	10.0 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.128	lb ai/a	A	0.0 a	96.0 a	99.0 a	99.0 a	99.0 a	99.0 a	94.3 a	0.0 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	4.5	lb ai/a	A	0.0 a	0.0 b	99.0 a	99.0 a	99.0 a	99.0 a	94.3 a	0.0 a
	LSD (P=.05)				0.00	6.79	0.00	0.00	0.00	0.00	19.33	12.86
	Standard Deviation				0.00	3.73	0.00	0.00	0.00	0.00	10.62	7.07
	CV				0.0	5.86	0.0	0.0	0.0	0.0	14.61	424.26
	Bartlett's X2				0.0	2.719	0.0	0.0	0.0	0.0	1.666	0.0
	P(Bartlett's X2)				.	0.437	.	.	.	.	0.797	.
	Replicate F				0.000	6.708	0.000	0.000	0.000	0.000	0.474	1.000
	Replicate Prob(F)				1.0000	0.0142	1.0000	1.0000	1.0000	1.0000	0.6356	0.4019
	Treatment F				0.000	525.313	0.000	0.000	0.000	0.000	35.879	1.000
	Treatment Prob(F)				1.0000	0.0001	1.0000	1.0000	1.0000	1.0000	0.0001	0.4651

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 566/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	17	18	19	20	21	22	23	24
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				ACHDI	PHLPR	HOLLA	DAUCA	ASTPI	TRFPR	GLEHE	SOOCA
	Pest Scientific Name				Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota	Symphyotrichum>	Trifolium prat>	Glechoma heder>	Solidago canad>
	Pest Name				Tmilfoil	Timothy	velvet grass	Wild carrot	WHaster	Rclover	Givy	Cgoldenrod
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	CROP -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				7/24/2011	7/24/2011	7/24/2011	7/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
	Rating Type				CONTROL	INJURY	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				61 61	61 61	61 61	61 61	92 92	92 92	92 92	92 92
	Trt-Eval Interval				60DAT	60DAT	60DAT	60DAT	90DAT	90DAT	90DAT	90DAT
1	UNTREATED CONTROL				0.0 c	0.0 c	0.0 a	0.0 c	0.0 b	0.0 b	0.0 b	0.0 b
2	MAT 28+	1.0	oz ai/a	A	99.0 a	0.0 c	0.0 a	96.0 a	94.3 a	99.0 a	99.0 a	99.0 a
	2, 4-D AMINE+	7.6	oz ai/a	A								
	NIS	0.25	% v/v	A								
3	MAT 28+	2.0	oz ai/a	A	99.0 a	0.0 c	0.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a
	2, 4-D AMINE+	15.20	oz ai/a	A								
	NIS	0.25	% v/v	A								
4	RDQ98+	0.08	lb ai/a	A	99.0 a	43.3 b	0.0 a	97.7 a	99.0 a	99.0 a	99.0 a	99.0 a
	NIS	0.25	% v/v	A								
5	RDQ98+	0.128	lb ai/a	A	99.0 a	97.7 a	0.0 a	99.0 a	81.0 a	99.0 a	99.0 a	99.0 a
	NIS	0.25	% v/v	A								
6	CROSSBOW	4.5	lb ai/a	A	48.3 b	0.0 c	0.0 a	63.0 b	99.0 a	99.0 a	99.0 a	99.0 a
	LSD (P=.05)				27.87	8.91	0.00	23.07	24.49	0.00	0.00	0.00
	Standard Deviation				15.32	4.90	0.00	12.68	13.46	0.00	0.00	0.00
	CV				20.69	20.85	0.0	16.73	17.1	0.0	0.0	0.0
	Bartlett's X2				0.0	3.669	0.0	10.501	2.772	0.0	0.0	0.0
	P(Bartlett's X2)				.	0.055	.	0.005*	0.096	.	.	.
	Replicate F				1.000	0.778	0.000	1.402	0.722	0.000	0.000	0.000
	Replicate Prob(F)				0.4019	0.4853	1.0000	0.2906	0.5095	1.0000	1.0000	1.0000
	Treatment F				22.072	202.576	0.000	29.376	25.417	0.000	0.000	0.000
	Treatment Prob(F)				0.0001	0.0001	1.0000	0.0001	0.0001	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 566/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	25	26	27	28	29	30
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				ROSMU	DACGL	ACHDI	PHLPR	HOLLA	DAUCA
	Pest Scientific Name				Rosa multiflora	Dactylis glome>	Achillea dista>	Phleum pratense	Holcus lanatus	Daucus carota
	Pest Name				MFrose	Orchard grass	T milfoil	Timothy	velvet grass	Wild carrot
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	CROP -	WEED -	CROP -	CROP -	WEED -
	Rating Date				8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
	Rating Type				CONTROL	INJURY	CONTROL	INJURY	INJURY	CONTROL
	Rating Unit				%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0
	Days After First/Last Applic.				92 92	92 92	92 92	92 92	92 92	92 92
	Trt-Eval Interval				90DAT	90DAT	90DAT	90DAT	90DAT	90DAT
1	UNTREATED CONTROL				0.0 b	0.0 a	0.0 c	0.0 a	0.0 a	0.0 b
2	MAT 28+	1.0	oz ai/a	A	91.3 a	0.0 a	97.7 a	0.0 a	0.0 a	96.0 a
	2, 4-D AMINE+	7.6	oz ai/a	A						
	NIS	0.25	% v/v	A						
3	MAT 28+	2.0	oz ai/a	A	86.7 a	0.0 a	99.0 a	0.0 a	0.0 a	99.0 a
	2, 4-D AMINE+	15.20	oz ai/a	A						
	NIS	0.25	% v/v	A						
4	RDQ98+	0.08	lb ai/a	A	84.7 a	21.7 a	99.0 a	0.0 a	0.0 a	99.0 a
	NIS	0.25	% v/v	A						
5	RDQ98+	0.128	lb ai/a	A	92.7 a	10.0 a	99.0 a	0.0 a	0.0 a	99.0 a
	NIS	0.25	% v/v	A						
6	CROSSBOW	4.5	lb ai/a	A	96.0 a	10.0 a	93.0 b	0.0 a	0.0 a	86.0 a
	LSD (P=.05)				20.48	24.27	4.06	0.00	0.00	16.39
	Standard Deviation				11.26	13.34	2.23	0.00	0.00	9.01
	CV				14.97	192.15	2.75	0.0	0.0	11.29
	Bartlett's X2				4.625	0.02	1.144	0.0	0.0	3.168
	P(Bartlett's X2)				0.328	0.99	0.285	.	.	0.075
	Replicate F				0.650	0.382	1.481	0.000	0.000	1.576
	Replicate Prob(F)				0.5429	0.6919	0.2733	1.0000	1.0000	0.2541
	Treatment F				32.530	1.281	956.644	0.000	0.000	57.450
	Treatment Prob(F)				0.0001	0.3446	0.0001	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

MULTIFLORA ROSE - WEED CONTROL WITH MAT28

Trial ID: MULTIFROSEWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: # US 566/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ASTPI, Symphyotrichum pilosum, = US
TRFPR, Trifolium pratense, = US
GLEHE, Glechoma hederacea, = US
SOOCA, Solidago canadensis, = US
ROSMU, Rosa multiflora, = US
DACGL, Dactylis glomerata, = US
ACHDI, Achillea distans, = US
PHLPR, Phleum pratense, = US
HOLLA, Holcus lanatus, = US
DAUCA, Daucus carota, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	PEPPERHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA
Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 1/1/2011
Planned Completion Date: 12/31/2011

COOPERATOR/LANDOWNER

Cooperator: Bruce Williams
Org: OARDC, Depatment HCS
Address 1: Fry Farm
City: Wooster
State/Prov: Ohio
Postal Code: 44691
Country: USA
Phone No: 330-263-3940

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: The objective of this trial is to evaluate the effect of 2,4-D, dicamba, and glyphosate simulated drift on bell peppers. The trial was kept weed free. Damage ratings and growth measurements were taken at 3, 7, 14, 21, and 28 days after treatment. Yield data was taken for four seperate harvest dates.
Conclusions: Injury appeared at 3 days after treatment on the 1x 2,4-D and dicamba treatments. These two treatments were significantly injured compared to all other treatments for the whole course of the experiment. The height of the same two treatments was significantly reduced by 14 days after treatment. The 2,4-D and dicamba at both 1x and 1/50x rates had significantly reduced fruit set compared to other treatments. The three herbicides tested appeared to have minimal effect on the final fruit set and yield at lower rates or in combination at lower rates.

Crop 1: BRSOK Peppers **Variety:** Aristotle
Planting Date: 6/21/2010 **Planting Method:** MACHINE TRANSPLANTED
Rate: 1 PLANT/12" **Depth:** 2 IN
Row Spacing: 5 FT **Spacing Within Row:** 24 IN **Seed Bed:** CONVENTIONAL
Soil Moisture: MOIST

SITE AND DESIGN

Plot Width, Unit: 3 FT **Plot Length, Unit:** 15 FT **Reps:** 4
Site Type: LEVEL WELL DRAINED
Tillage Type: MOLDBOARD PLOW **Study Design:** RACOBL

SOIL DESCRIPTION

% Sand: 16 **% OM:** 3.11 **Texture:** SILT LOAM
% Silt: 72 **pH:** 6.7 **Soil Name:** WOOSTER SILT LOAM
% Clay: 12 **CEC:** 8.5 **Fert. Level:** MODERATE

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	PEPPERHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

APPLICATION DESCRIPTION

	A
Application Date:	7/5/2011
Time of Day:	9-11 am
Application Method:	SPRAY
Application Timing:	POST3WATP
Applic. Placement:	BROADCAST
Air Temp., Unit:	75.5 F
% Relative Humidity:	63.1
Wind Velocity, Unit:	2.82 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	71.1 F

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	BRSOK POST
Stage Scale:	8 LEAF
Height, Unit:	5 IN

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 BKPK
Operating Pressure:	40
Nozzle Type:	FLAT FAN
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.3 MPH
Spray Volume, Unit:	15 GPA
Propellant:	CO2

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 3 by 15 feet
Spray vol: 15 gal/ac Mix size: 3 liters (min .26983)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	WEEDAR 64 (1 X)	3.8	SL	0.75	lb ae/a	POST	B	39.47 ml/mx	101	219	321	404
2	WEEDAR 64 (1/50 X)	3.8	SL	0.015	lb ae/a	POST	B	0.7894 ml/mx	102	220	310	406
3	WEEDAR 64 (1/100 X)	3.8	SL	0.0075	lb ae/a	POST	B	0.3947 ml/mx	103	217	304	401
4	WEEDAR 64 (1/150 X)	3.8	SL	0.005	lb ae/a	POST	B	0.2631 ml/mx	104	218	319	416
5	WEEDAR 64 (1/200 X)	3.8	SL	0.00374	lb ae/a	POST	B	0.1968 ml/mx	105	207	316	403
6	WEEDAR 64 (1/400 X)	3.8	SL	0.00187	lb ae/a	POST	B	.09841 ml/mx	106	208	320	410
7	CLARITY (1/50 X)	4	SL	0.01	lb ae/a	POST	B	0.4999 ml/mx	107	211	315	417
8	CLARITY (1/100 X)	4	SL	0.005	lb ae/a	POST	B	0.25 ml/mx	108	204	312	409
9	CLARITY (1/150 X)	4	SL	0.00333	lb ae/a	POST	B	0.1665 ml/mx	109	221	303	408
10	CLARITY (1/200 X)	4	SL	0.0025	lb ae/a	POST	B	0.125 ml/mx	110	213	301	402
11	CLARITY (1/400 X)	4	SL	0.00125	lb ae/a	POST	B	.06249 ml/mx	111	205	308	418
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	3.8 4	SL SL	0.0075 0.0075	lb ae/a lb ae/a	POST POST	B B	0.3947 ml/mx 0.375 ml/mx	112	201	307	413
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	3.8 4	SL SL	0.00374 0.00374	lb ae/a lb ae/a	POST POST	B B	0.1968 ml/mx 0.187 ml/mx	113	216	306	407
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	3.8 4	SL SL	0.00187 0.00187	lb ae/a lb ae/a	POST POST	B B	.09841 ml/mx .09349 ml/mx	114	212	305	411
16	Clarity (1x)	4	SL	0.5	lb ae/a	POST	B	25.0 ml/mx	116	215	318	415
17	Durango (1/100 x)	4	SL	0.0075	lb ae/a	POST	B	0.375 ml/mx	117	210	302	412
18	DURANGO (1/400 x)	4	SL	0.00187	lb ae/a	POST	B	.09349 ml/mx	118	214	309	421
19	Clarity (1/100 x) Durango (1/100 x)	4 4	SL SL	0.005 0.0075	lb ae/a lb ae/a	POST POST	B B	0.25 ml/mx 0.375 ml/mx	119	206	311	420
20	Clarity (1/200 x) Durango (1/200 x)	4 4	SL SL	0.0025 0.00374	lb ae/a lb ae/a	POST POST	B B	0.125 ml/mx 0.187 ml/mx	120	202	313	414
21	Clarity (1/400 x) Durango (1/400 x)	4 4	SL SL	0.00125 0.00187	lb ae/a lb ae/a	POST POST	B B	.06249 ml/mx .09349 ml/mx	121	209	314	419

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 3 by 15 feet
Spray vol: 15 gal/ac Mix size: 3 liters (min .26983)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
15	UNTREATED CONTROL								115	203	317	405

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
49.337	ml	WEEDAR 64 (1 X)	3.8	SL	
0.987	ml	WEEDAR 64 (1/50 X)	3.8	SL	
0.493	ml	WEEDAR 64 (1/100 X)	3.8	SL	
0.329	ml	WEEDAR 64 (1/150 X)	3.8	SL	
0.246	ml	WEEDAR 64 (1/200 X)	3.8	SL	
0.123	ml	WEEDAR 64 (1/400 X)	3.8	SL	
0.625	ml	CLARITY (1/50 X)	4	SL	
0.312	ml	CLARITY (1/100 X)	4	SL	
0.208	ml	CLARITY (1/150 X)	4	SL	
0.312	ml	CLARITY (1/200 X)	4	SL	
0.078	ml	CLARITY (1/400 X)	4	SL	
0.493	ml	WEEDAR 64 (1/100 X)+	3.8	SL	
1.406	ml	DURANGO (1/100 X)	4	SL	
0.246	ml	WEEDAR 64 (1/200 X)+	3.8	SL	
0.467	ml	DURANGO (1/200 X)	4	SL	
0.123	ml	WEEDAR 64 (1/400 X)+	3.8	SL	
0.351	ml	DURANGO (1/400 X)	4	SL	
31.247	ml	Clarity (1x)	4	SL	
0.312	ml	Clarity (1/100 x)	4	SL	
0.078	ml	Clarity (1/400 x)	4	SL	

* 'Per area' calculations based on spray volume= 15 gal/ac, mix size= 3 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	3	402	10	403	5	404	1	405	15	406	2	407	13	408	9	409	8	410	6
3	3	301	10	302	17	303	9	304	3	305	14	306	13	307	12	308	11	309	18	310	2
2	2	201	12	202	20	203	15	204	8	205	11	206	19	207	5	208	6	209	21	210	17
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk																		
4	4	411	14	412	17	413	12	414	20	415	16	416	4	417	7	418	11	419	21	420	19
3	3	311	19	312	8	313	20	314	21	315	7	316	5	317	15	318	16	319	4	320	6
2	2	211	7	212	14	213	10	214	18	215	16	216	13	217	3	218	4	219	1	220	2
1	1	111	11	112	12	113	13	114	14	115	15	116	16	117	17	118	18	119	19	120	20

Rep	Blk		
4	4	421	18
3	3	321	1
2	2	221	9
1	1	121	21

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	CUPPING	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	3DAT	7DAT	7DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0	0	75	75	0	0	0	40	35	25
					219	0	0	100	60	0	0	15	40	40	25
					321	0	0	100	60	0	0	10	30	45	20
					404	0	0	100	60	0	0	15	20	40	10
					Mean =	0	0	94	64	0	0	10	33	40	20
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0	0	15	15	10	0	0	10	20	10
					220	0	0	20	10	25	0	0	15	20	15
					310	0	0	5	5	15	0	0	10	10	20
					406	0	0	0	0	5	0	0	10	10	20
					Mean =	0	0	10	8	14	0	0	11	15	16
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0	0	5	35	15	0	0	5	15	10
					217	0	0	0	10	10	0	0	5	15	20
					304	0	0	10	0	5	0	0	15	20	15
					401	0	0	5	0	10	0	0	5	5	10
					Mean =	0	0	5	11	10	0	0	8	14	14
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0	0	5	15	20	0	0	5	10	10
					218	0	0	5	0	5	0	0	10	15	25
					319	0	0	10	10	5	0	0	5	10	20
					416	0	0	15	10	15	0	0	5	15	25
					Mean =	0	0	9	9	11	0	0	6	13	20
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0	0	0	20	10	0	0	5	5	5
					207	0	0	10	0	10	0	0	5	10	15
					316	0	0	10	10	10	0	0	10	10	20
					403	0	0	5	0	5	0	0	5	10	15
					Mean =	0	0	6	8	9	0	0	6	9	14
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0	0	0	10	10	0	0	5	10	10
					208	0	0	5	5	5	0	0	0	10	10
					320	0	0	5	5	5	0	0	5	5	5
					410	0	0	15	10	5	0	0	0	5	0
					Mean =	0	0	6	8	6	0	0	3	8	6

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT - NECROSIS % 7/8/2011 3 DAT - 0 (1)	PEPPER PLANT - CHLOROSIS % 7/8/2011 3 DAT - 0 (2)	PEPPER PLANT - EPINASTY % 7/8/2011 3 DAT - 0 (3)	PEPPER PLANT - STUNT % 7/8/2011 3 DAT - 0 (4)	PEPPER PLANT - CUPPING % 7/8/2011 3DAT - 0 (5)	PEPPER PLANT - NECROSIS % 7/12/2011 7DAT - 0 (6)	PEPPER PLANT - CHLOROSIS % 7/12/2011 7DAT - 0 (7)	PEPPER PLANT - EPINASTY % 7/12/2011 7 DAT - 0 (8)	PEPPER PLANT - INJURY % 7/12/2011 7 DAT - 0 (9)	PEPPER PLANT - LEAFCURL % 7/12/2011 7 DAT - 0 (10)
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0	0	0	30	20	0	0	10	15	40
					211	0	0	5	25	20	0	0	5	10	25
					315	0	0	5	10	10	0	0	10	15	25
					417	0	0	15	0	10	0	0	10	15	30
					Mean =	0	0	6	16	15	0	0	9	14	30
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0	0	10	15	5	0	0	10	10	30
					204	0	0	0	20	15	0	0	5	15	15
					312	0	0	5	0	5	0	0	10	10	10
					409	0	0	10	15	5	0	0	5	15	20
					Mean =	0	0	6	13	8	0	0	8	13	19
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0	0	0	5	5	0	0	5	10	30
					221	0	0	5	5	5	0	0	5	15	25
					303	0	0	20	30	20	0	0	5	10	5
					408	0	0	5	0	0	0	0	5	10	15
					Mean =	0	0	8	10	8	0	0	5	11	19
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0	0	5	10	10	0	0	5	10	40
					213	0	0	0	10	15	0	0	10	5	5
					301	0	0	20	30	10	0	0	10	25	30
					402	0	0	10	0	0	0	0	0	5	15
					Mean =	0	0	9	13	9	0	0	6	11	23
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0	0	15	10	15	0	0	5	15	15
					205	0	0	15	15	10	0	0	5	15	20
					308	0	0	25	10	5	0	0	5	5	5
					418	0	0	10	0	10	0	0	0	5	5
					Mean =	0	0	16	9	10	0	0	4	10	11
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0	0	5	0	10	0	0	5	20	20
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0	0	5	10	10	0	0	5	15	10
					307	0	0	10	0	5	0	0	5	15	30
					413	0	0	5	0	5	0	0	10	15	15
					Mean =	0	0	6	3	8	0	0	6	16	19

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT - NECROSIS % 7/8/2011 3 DAT - 0 (1)	PEPPER PLANT - CHLOROSIS % 7/8/2011 3 DAT - 0 (2)	PEPPER PLANT - EPINASTY % 7/8/2011 3 DAT - 0 (3)	PEPPER PLANT - STUNT % 7/8/2011 3 DAT - 0 (4)	PEPPER PLANT - CUPPING % 7/8/2011 3DAT - 0 (5)	PEPPER PLANT - NECROSIS % 7/12/2011 7DAT - 0 (6)	PEPPER PLANT - CHLOROSIS % 7/12/2011 7DAT - 0 (7)	PEPPER PLANT - EPINASTY % 7/12/2011 7 DAT - 0 (8)	PEPPER PLANT - INJURY % 7/12/2011 7 DAT - 0 (9)	PEPPER PLANT - LEAFCURL % 7/12/2011 7 DAT - 0 (10)
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0	0	0	20	15	0	0	5	10	20
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0	0	10	45	30	0	0	0	20	35
					306	0	0	15	0	10	0	0	10	15	15
					407	0	0	10	5	10	0	0	5	10	20
					Mean =	0	0	9	18	16	0	0	5	14	23
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0	0	10	5	5	0	0	5	5	5
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0	0	15	15	30	0	0	0	5	5
					305	0	0	5	20	15	0	0	5	10	20
					411	0	0	5	0	5	0	0	0	5	5
					Mean =	0	0	9	10	14	0	0	3	6	9
15	UNTREATED CONTROL				115	0	0	0	0	0	0	0	0	0	0
					203	0	0	0	0	0	0	0	0	0	0
					317	0	0	0	0	0	0	0	0	0	0
					405	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
16	Clarity (1x)	0.5	lb ae/a	B	116	0	0	40	30	20	0	0	10	15	15
					215	0	0	90	60	10	0	5	20	50	45
					318	0	0	90	50	10	5	10	80	70	60
					415	0	0	90	55	10	0	10	60	50	35
					Mean =	0	0	78	49	13	1	6	43	46	39
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0	0	5	20	10	0	0	10	20	15
					210	0	0	30	15	15	0	0	5	10	20
					302	0	0	10	0	10	0	0	5	10	5
					412	0	0	5	0	5	0	0	5	10	10
					Mean =	0	0	13	9	10	0	0	6	13	13
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0	0	0	0	10	0	0	5	10	15
					214	0	0	5	0	10	0	0	5	5	10
					309	0	0	10	0	10	0	0	5	5	10
					421	0	0	10	0	10	0	0	5	5	10
					Mean =	0	0	6	0	10	0	0	5	6	11

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
	Rating Data Type					NECROSIS	CHLOROSIS	EPINASTY	STUNT	CUPPING	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	3DAT	7DAT	7DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0	0	0	15	15	0	0	10	15	30
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0	0	10	40	10	0	0	5	30	45
					311	0	0	5	0	5	0	0	10	15	20
					420	0	0	10	0	0	0	0	15	15	25
					Mean =	0	0	6	14	8	0	0	10	19	30
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0	0	0	10	5	0	0	10	10	20
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0	0	5	20	10	0	0	5	15	20
					313	0	0	15	10	5	0	0	5	15	25
					414	0	0	5	0	0	0	0	5	5	20
					Mean =	0	0	6	10	5	0	0	6	11	21
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0	0	0	5	5	0	0	10	5	20
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0	0	5	0	15	0	0	5	10	10
					314	0	0	10	0	5	0	0	5	5	10
					419	0	0	10	15	5	0	0	10	10	5
					Mean =	0	0	6	5	8	0	0	8	8	11

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT1 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT2 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT3 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT4 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT5 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT - NECROSIS % 7/19/2011 14 DAT - 0	PEPPER PLANT - CHLOROSIS % 7/19/2011 14 DAT - 0	PEPPER PLANT - EPINASTY % 7/19/2011 14 DAT - 0	PEPPER PLANT - INJURY % 7/19/2011 14 DAT - 0	PEPPER PLANT - LEAFCURL % 7/19/2011 14DAT	PEPPER PLANT1 - HEIGHT CM 7/19/2011 14DAT - 1
						11	12	13	14	15	16	17	18	19	20	21
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	11	13	13	12	16	0	5	15	30	40.0	11.0
					219	16	15	15	14	16	0	20	60	45	10.0	18.0
					321	12	14	12	12	10	0	20	15	35	30.0	15.0
					404	15	11	13	16	15	0	30	15	40	25.0	17.0
					Mean =	14	13	13	14	14	0	19	26	38	26.3	15.3
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	15	14	15	15	12	0	10	0	15	20.0	19.0
					220	14	15	18	17	16	0	5	15	15	20.0	17.0
					310	17	14	15	18	13	0	0	10	10	10.0	21.0
					406	21	17	21	16	14	0*	5*	14*	16*	19.8*	20.2*
					Mean =	17	15	17	17	14	0	5	10	14	17.5	19.3
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	16	12	15	16	16	0	5	0	10	10.0	20.0
					217	17	16	14	15	15	0	5	10	10	5.0	20.0
					304	16	17	15	15	18	5	0	5	5	15.0	20.0
					401	17	19	18	18	13	0	0	35	20	10.0	22.0
					Mean =	17	16	16	16	16	1	3	13	11	10.0	20.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	17	15	13	12	18	0	5	5	15	10.0	20.0
					218	16	15	17	15	15	0	5	10	10	10.0	19.0
					319	14	17	16	14	12	0	5	10	15	15.0	20.0
					416	17	16	14	15	13	0	5	25	20	30.0	20.0
					Mean =	16	16	15	14	15	0	5	13	15	16.3	19.8
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	17	15	12	14	14	0	10	5	20	20.0	21.0
					207	18	16	14	17	18	0	0	15	10	15.0	19.0
					316	17	17	15	20	11	0	5	25	15	5.0	19.0
					403	17	17	18	18	15	0	0	5	5	10.0	22.0
					Mean =	17	16	15	17	15	0	4	13	13	12.5	20.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	17	13	18	18	15	0	15	5	25	20.0	20.0
					208	16	15	15	17	18	0	0	0	5	5.0	19.0
					320	15	15	16	15	16	0	0	5	5	5.0	19.0
					410	13	13	17	16	18	0	10	15	20	15.0	18.0
					Mean =	15	14	17	17	17	0	6	6	14	11.3	19.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT1 - HEIGHT CM 7/12/2011 7DAT - 0 (11)	PEPPER PLANT2 - HEIGHT CM 7/12/2011 7DAT - 0 (12)	PEPPER PLANT3 - HEIGHT CM 7/12/2011 7DAT - 0 (13)	PEPPER PLANT4 - HEIGHT CM 7/12/2011 7DAT - 0 (14)	PEPPER PLANT5 - HEIGHT CM 7/12/2011 7DAT - 0 (15)	PEPPER PLANT - NECROSIS % 7/19/2011 14 DAT - 0 (16)	PEPPER PLANT - CHLOROSIS % 7/19/2011 14 DAT - 0 (17)	PEPPER PLANT - EPINASTY % 7/19/2011 14 DAT - 0 (18)	PEPPER PLANT - INJURY % 7/19/2011 14 DAT - 0 (19)	PEPPER PLANT - LEAFCURL % 7/19/2011 14DAT (20)	PEPPER PLANT1 - HEIGHT CM 7/19/2011 14DAT - 1 (21)
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	15	14	15	12	14	0	10	10	15	10.0	18.0
					211	16	14	15	15	16	0	0	15	10	5.0	19.0
					315	14	16	12	14	15	0	5	30	25	15.0	15.0
					417	16	16	17	15	14	0	5	20	15	20.0	17.0
					Mean =	15	15	15	14	15	0	5	19	16	12.5	17.3
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	17	15	15	14	15	0	10	30	30	30.0	20.0
					204	13	14	15	16	14	0	5	10	10	10.0	18.0
					312	15	16	18	17	15	0	0	10	15	20.0	19.0
					409	16	17	16	14	13	0	0	20	15	20.0	18.0
					Mean =	15	16	16	15	14	0	4	18	18	20.0	18.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	17	17	15	16	17	0	5	10	20	25.0	19.0
					221	14	14	16	14	14	0	0	20	20	25.0	19.0
					303	17	16	12	14	16	0	5	10	10	10.0	21.0
					408	18	16	16	17	13	0	0	15	10	15.0	20.0
					Mean =	17	16	15	15	15	0	3	14	15	18.8	19.8
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	14	12	14	12	16	0	5	15	25	30.0	18.0
					213	14	14	16	14	17	0	5	15	15	15.0	19.0
					301	16	17	18	12	18	0	0	0	0	5.0	20.0
					402	18	17	17	17	16	0	0	30	20	15.0	20.0
					Mean =	16	15	16	14	17	0	3	15	15	16.3	19.3
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	12	13	14	15	16	0	10	15	30	10.0	18.0
					205	14	16	17	14	13	0	0	5	10	5.0	22.0
					308	20	18	19	17	17	0	0	10	10	10.0	23.0
					418	16	17	14	15	15	0	0	5	5	10.0	20.0
					Mean =	16	16	16	15	15	0	3	9	14	8.8	20.8
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	15	14	18	14	16	0	5	5	10	10.0	20.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	18	14	17	13	16	0	5	10	15	20.0	21.0
					307	18	16	15	17	18	0	0	0	5	5.0	20.0
					413	16	17	16	17	16	0	10	25	25	20.0	20.0
					Mean =	17	15	17	15	17	0	5	10	14	13.8	20.3

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT1 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT2 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT3 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT4 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT5 - HEIGHT CM 7/12/2011 7DAT - 0	PEPPER PLANT - NECROSIS % 7/19/2011 14 DAT - 0	PEPPER PLANT - CHLOROSIS % 7/19/2011 14 DAT - 0	PEPPER PLANT - EPINASTY % 7/19/2011 14 DAT - 0	PEPPER PLANT - INJURY % 7/19/2011 14 DAT - 0	PEPPER PLANT - LEAFCURL % 7/19/2011 14DAT	PEPPER PLANT1 - HEIGHT CM 7/19/2011 14DAT - 1
						11	12	13	14	15	16	17	18	19	20	21
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	14	13	13	14	15	0	5	15	15	10.0	18.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	12	14	13	12	12	0	10	10	15	10.0	14.0
					306	16	18	16	17	18	0	0	5	5	5.0	19.0
					407	19	16	17	14	15	0	10	15	15	25.0	25.0
					Mean =	15	15	15	14	15	0	6	11	13	12.5	19.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	16	15	17	14	15	0	0	10	5	5.0	22.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	16	17	15	13	16	0	10	5	10	5.0	19.0
					305	14	14	16	10	15	0	0	10	5	5.0	17.0
					411	15	16	13	17	15	0	0	10	5	5.0	20.0
					Mean =	15	16	15	14	15	0	3	9	6	5.0	19.5
15	UNTREATED CONTROL				115	14	16	12	15	12	0	0	10	0	0.0	16.0
					203	16	13	15	14	14	0	0	0	0	0.0	19.0
					317	16	18	16	19	20	0	0	0	0	0.0	19.0
					405	17	15	18	16	17	0	0	0	0	0.0	22.0
					Mean =	16	16	15	16	16	0	0	3	0	0.0	19.0
16	Clarity (1x)	0.5	lb ae/a	B	116	18	13	16	14	18	0	0	15	10	5.0	18.0
					215	13	11	16	11	10	10	5	40	65	40.0	14.0
					318	12	11	14	14	12	0	15	40	45	40.0	13.0
					415	14	14	12	12	15	0	15	35	40	35.0	17.0
					Mean =	14	12	15	13	14	3	9	33	40	30.0	15.5
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	13	15	13	16	13	0	10	15	15	10.0	16.0
					210	13	14	15	17	17	0	0	0	5	5.0	19.0
					302	15	15	17	16	14	0	0	10	10	5.0	18.0
					412	18	15	15	15	19	0	0	10	5	5.0	23.0
					Mean =	15	15	15	16	16	0	3	9	9	6.3	19.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	18	18	10	14	17	0	5	5	5	10.0	24.0
					214	13	15	17	17	15	0	0	5	5	5.0	17.0
					309	16	15	15	14	15	0	0	10	5	5.0	20.0
					421	16	15	15	10	16	0	0	10	5	10.0	19.0
					Mean =	16	16	14	14	16	0	1	8	5	7.5	20.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20	21
	Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated					PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -
	Rating Data Type					HEIGHT	HEIGHT	HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	HEIGHT
	Rating Unit					CM	CM	CM	CM	CM	%	%	%	%	%	CM
	Rating Date					7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
	Trt-Eval Interval					7DAT	7DAT	7DAT	7DAT	7DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0		- 1
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	17	18	20	18	16	0	5	10	10	15.0	21.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	12	15	14	11	13	0	0	0	5	15.0	16.0
					311	15	15	15	13	17	0	10	10	10	15.0	18.0
					420	17	15	18	10	17	0	10	25	40	30.0	20.0
					Mean =	15	16	17	13	16	0	6	11	16	18.8	18.8
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	17	15	18	15	16	0	10	10	10	10.0	19.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	14	13	15	16	14	0	10	20	25	20.0	17.0
					313	15	13	15	14	18	0	5	5	10	10.0	20.0
					414	19	18	17	15	15	0	5	15	15	10.0	20.0
					Mean =	16	15	16	15	16	0	8	13	15	12.5	19.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	12	15	12	17	16	0	10	10	20	20.0	18.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	17	17	17	17	15	0	5	5	15	10.0	23.0
					314	17	15	18	17	16	0	5	15	15	15.0	20.0
					419	15	16	13	10	16	0	5	20	20	10.0	19.0
					Mean =	15	16	15	15	16	0	6	13	18	13.8	20.0

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Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT3 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT - NECROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - EPINASTY % 7/26/2011 21 DAT - 0	PEPPER PLANT - INJURY % 7/26/2011 21 DAT - 0	PLANT - LEAFCURL % 7/26/2011 21 DAT	PLANT - STUNT % 7/26/2011 21DAT - 0	PEPPER PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1
						22	23	24	25	26	27	28	29	30	31	32
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	13.0	13.0	11.0	15.0	0	5	15	50	25.0	70	11.0
					219	17.0	17.0	17.0	17.0	0	15	30	80	40.0	60	12.0
					321	15.0	13.0	14.0	12.0	0	5	10	70	75.0	65	16.0
					404	12.0	15.0	18.0	16.0	0	0	10	75	85.0	60	19.0
					Mean =	14.3	14.5	15.0	15.0	0	6	16	69	56.3	64	14.5
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	18.0	19.0	19.0	17.0	0	5	10	20	20.0	20	31.0
					220	19.0	20.0	18.0	20.0	0	0	10	20	30.0	15	36.0
					310	18.0	19.0	20.0	17.0	0	5	5	10	20.0	10	37.0
					406	19.0*	19.5*	19.9*	17.5*	0	5	15	20	20.0	10	43.0
					Mean =	18.5	19.4	19.2	17.9	0	4	10	18	22.5	14	36.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	16.0	19.0	19.0	19.0	0	0	10	10	25.0	5	38.0
					217	20.0	17.0	16.0	20.0	0	5	10	15	20.0	10	36.0
					304	21.0	17.0	20.0	20.0	0	0	5	10	20.0	10	32.0
					401	25.0	23.0	22.0	18.0	0	5	5	5	25.0	5	34.0
					Mean =	20.5	19.0	19.3	19.3	0	3	8	10	22.5	8	35.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	20.0	19.0	16.0	20.0	0	0	5	10	10.0	10	33.0
					218	20.0	21.0	22.0	19.0	0	5	5	10	15.0	5	30.0
					319	19.0	22.0	20.0	18.0	0	0	5	10	10.0	10	36.0
					416	19.0	17.0	18.0	14.0	0	5	10	20	25.0	15	34.0
					Mean =	19.5	19.8	19.0	17.8	0	3	6	13	15.0	10	33.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	19.0	19.0	18.0	18.0	0	0	0	5	10.0	0	33.0
					207	20.0	22.0	20.0	17.0	0	5	0	5	15.0	5	30.0
					316	17.0	17.0	21.0	13.0	0	5	5	15	30.0	15	34.0
					403	22.0	22.0	22.0	21.0	0	0	0	5	20.0	5	37.0
					Mean =	19.5	20.0	20.3	17.3	0	3	1	8	18.8	6	33.5
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	18.0	20.0	21.0	21.0	0	0	0	5	10.0	0	31.0
					208	20.0	18.0	13.0	23.0	0	0	5	5	10.0	0	35.0
					320	20.0	21.0	19.0	19.0	0	0	0	5	10.0	0	29.0
					410	18.0	21.0	20.0	20.0	0	0	0	5	10.0	0	31.0
					Mean =	19.0	20.0	18.3	20.8	0	0	1	5	10.0	0	31.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT3 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT - NECROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - EPINASTY % 7/26/2011 21 DAT - 0	PEPPER PLANT - INJURY % 7/26/2011 21 DAT - 0	PLANT - LEAFCURL % 7/26/2011 21 DAT	PLANT - STUNT % 7/26/2011 21DAT - 0	PEPPER PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1
						22	23	24	25	26	27	28	29	30	31	32
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	17.0	18.0	16.0	18.0	0	10	10	20	30.0	25	33.0
					211	17.0	16.0	17.0	17.0	0	5	0	15	25.0	15	32.0
					315	18.0	14.0	17.0	17.0	0	10	10	20	30.0	20	30.0
					417	18.0	19.0	18.0	16.0	0	5	10	30	25.0	25	34.0
					Mean =	17.5	16.8	17.0	17.0	0	8	8	21	27.5	21	32.3
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	17.0	20.0	21.0	20.0	0	0	5	10	15.0	10	31.0
					204	17.0	19.0	19.0	17.0	0	5	5	20	25.0	20	29.0
					312	20.0	17.0	19.0	20.0	0	5	10	10	30.0	10	28.0
					409	18.0	16.0	21.0	16.0	0	5	10	15	15.0	20	37.0
					Mean =	18.0	18.0	20.0	18.3	0	4	8	14	21.3	15	31.3
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	20.0	18.0	20.0	21.0	0	5	0	5	10.0	5	38.0
					221	18.0	20.0	18.0	20.0	0	0	10	15	25.0	10	30.0
					303	20.0	15.0	18.0	20.0	0	5	5	15	20.0	20	36.0
					408	18.0	21.0	21.0	16.0	0	0	10	15	20.0	15	33.0
					Mean =	19.0	18.5	19.3	19.3	0	3	6	13	18.8	13	34.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	18.0	20.0	16.0	20.0	0	0	5	15	10.0	5	38.0
					213	18.0	21.0	20.0	21.0	0	0	10	5	15.0	0	32.0
					301	19.0	20.0	15.0	21.0	0	0	5	15	20.0	15	35.0
					402	18.0	21.0	20.0	22.0	0	5	5	5	10.0	5	40.0
					Mean =	18.3	20.5	17.8	21.0	0	1	6	10	13.8	6	36.3
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	17.0	20.0	21.0	19.0	0	0	0	10	10.0	0	26.0
					205	24.0	24.0	21.0	22.0	0	5	5	5	10.0	0	37.0
					308	23.0	23.0	19.0	20.0	0	0	0	15	15.0	0	40.0
					418	22.0	19.0	18.0	21.0	0	0	0	5	10.0	5	30.0
					Mean =	21.5	21.5	19.8	20.5	0	1	1	9	11.3	1	33.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	18.0	23.0	20.0	22.0	0	5	5	10	20.0	10	36.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	17.0	19.0	17.0	20.0	0	5	5	5	15.0	5	34.0
					307	20.0	19.0	19.0	23.0	0	5	5	15	25.0	5	39.0
					413	20.0	20.0	21.0	20.0	0	5	5	15	25.0	15	37.0
					Mean =	18.8	20.3	19.3	21.3	0	5	5	11	21.3	9	36.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT3 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1	PEPPER PLANT - NECROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0	PEPPER PLANT - EPINASTY % 7/26/2011 21 DAT - 0	PEPPER PLANT - INJURY % 7/26/2011 21 DAT - 0	PLANT - LEAFCURL % 7/26/2011 21 DAT	PLANT - STUNT % 7/26/2011 21DAT - 0	PEPPER PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1
						22	23	24	25	26	27	28	29	30	31	32
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	18.0	20.0	18.0	18.0	0	5	5	10	10.0	10	35.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	18.0	17.0	15.0	15.0	0	10	5	20	20.0	20	30.0
					306	22.0	19.0	20.0	21.0	0	10	5	10	20.0	5	26.0
					407	20.0	25.0	20.0	17.0	0	5	5	20	15.0	10	37.0
					Mean =	19.5	20.3	18.3	17.8	0	8	5	15	16.3	11	32.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	19.0	22.0	20.0	22.0	0	0	5	5	10.0	0	36.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	23.0	19.0	17.0	18.0	0	0	0	5	10.0	10	32.0
					305	17.0	19.0	14.0	17.0	0	0	0	5	15.0	0	36.0
					411	20.0	18.0	23.0	18.0	0	5	5	5	10.0	0	33.0
					Mean =	19.8	19.5	18.5	18.8	0	1	3	5	11.3	3	34.3
15	UNTREATED CONTROL				115	17.0	17.0	18.0	14.0	0	0	0	0	0.0	0	32.0
					203	18.0	23.0	21.0	20.0	0	0	0	0	0.0	0	36.0
					317	19.0	15.0	20.0	21.0	0	5	5	35	20.0	30	34.0
					405	18.0	19.0	21.0	21.0	0	0	0	0	0.0	0	37.0
					Mean =	18.0	18.5	20.0	19.0	0	1	1	9	5.0	8	34.8
16	Clarity (1x)	0.5	lb ae/a	B	116	14.0	15.0	14.0	18.0	0	5	10	50	65.0	45	24.0
					215	13.0	16.0	11.0	12.0	0	0	20	80	90.0	80	12.0
					318	12.0	17.0	17.0	14.0	0	0	25	75	10.0	60	12.0
					415	15.0	14.0	14.0	14.0	0	10	20	65	75.0	60	18.0
					Mean =	13.5	15.5	14.0	14.5	0	4	19	68	60.0	61	16.5
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	20.0	17.0	20.0	19.0	0	0	5	10	20.0	5	36.0
					210	18.0	20.0	21.0	19.0	0	0	5	10	15.0	10	29.0
					302	18.0	21.0	21.0	18.0	0	0	0	5	20.0	5	31.0
					412	20.0	20.0	20.0	23.0	0	5	5	10	20.0	10	38.0
					Mean =	19.0	19.5	20.5	19.8	0	1	4	9	18.8	8	33.5
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	21.0	20.0	19.0	22.0	0	5	0	5	10.0	0	37.0
					214	18.0	22.0	21.0	20.0	0	0	0	5	10.0	0	31.0
					309	18.0	20.0	21.0	17.0	0	0	0	5	15.0	0	37.0
					421	18.0	18.0	19.0	18.0	0	0	0	5	10.0	0	29.0
					Mean =	18.8	20.0	20.0	19.3	0	1	0	5	11.3	0	33.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 7/19/2011 14DAT - 1 (22)	PEPPER PLANT3 - HEIGHT CM 7/19/2011 14DAT - 1 (23)	PEPPER PLANT4 - HEIGHT CM 7/19/2011 14DAT - 1 (24)	PEPPER PLANT5 - HEIGHT CM 7/19/2011 14DAT - 1 (25)	PEPPER PLANT - NECROSIS % 7/26/2011 21 DAT - 0 (26)	PEPPER PLANT - CHLOROSIS % 7/26/2011 21 DAT - 0 (27)	PEPPER PLANT - EPINASTY % 7/26/2011 21 DAT - 0 (28)	PEPPER PLANT - INJURY % 7/26/2011 21 DAT - 0 (29)	PLANT - LEAFCURL % 7/26/2011 21 DAT (30)	PLANT - STUNT % 7/26/2011 21DAT - 0 (31)	PEPPER PLANT1 - HEIGHT CM 8/2/2011 28DAT - 1 (32)
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	22.0	23.0	19.0	19.0	0	5	10	20	25.0	25	39.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	16.0	17.0	15.0	16.0	0	10	10	20	20.0	25	33.0
					311	18.0	18.0	17.0	20.0	0	0	10	10	15.0	10	36.0
					420	19.0	20.0	18.0	19.0	0	0	10	15	20.0	15	33.0
					Mean =	18.8	19.5	17.3	18.5	0	4	10	16	20.0	19	35.3
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	21.0	19.0	22.0	20.0	0	0	10	15	25.0	5	34.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	18.0	19.0	21.0	19.0	0	0	5	5	10.0	5	33.0
					313	16.0	19.0	18.0	21.0	0	5	0	5	15.0	5	34.0
					414	21.0	17.0	17.0	16.0	0	5	0	5	15.0	0	38.0
					Mean =	19.0	18.5	19.5	19.0	0	3	4	8	16.3	4	34.8
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	20.0	17.0	20.0	21.0	0	5	0	5	5.0	0	31.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	23.0	20.0	19.0	17.0	0	0	0	5	5.0	0	39.0
					314	19.0	22.0	21.0	21.0	0	0	0	5	10.0	0	31.0
					419	21.0	16.0	14.0	19.0	0	0	5	5	5.0	10	29.0
					Mean =	20.8	18.8	18.5	19.5	0	1	1	5	6.3	3	32.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -
Rating Data Type					HEIGHT	HEIGHT	HEIGHT	HEIGHT	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET
Rating Unit					CM	CM	CM	CM	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT
Rating Date					8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/8/2011
Trt-Eval Interval					28DAT	28DAT	28DAT	28DAT	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	2WAFLGUC
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	33	34	35	36	37	38	39	40	41	42
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	15.0	13.0	11.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	12.0	10.0	16.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	14.0	14.0	14.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	15.0	17.0	22.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	14.0	13.5	15.8	15.3	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	35.0	33.0	35.0	35.0	1.0	0.0	0.0	1.0	0.0	1.0
					220	36.0	38.0	35.0	34.0	0.0	0.0	1.0	0.0	0.0	3.0
					310	37.0	34.0	36.0	32.0	1.0	0.0	0.0	1.0	1.0	5.0
					406	37.0	46.0	42.0	35.0	1.0	0.0	1.0	0.0	0.0	2.0
					Mean =	36.3	37.8	37.0	34.0	0.8	0.0	0.5	0.5	0.3	2.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	33.0	33.0	38.0	36.0	3.0	2.0	2.0	4.0	1.0	5.0
					217	34.0	27.0	29.0	28.0	0.0	2.0	3.0	1.0	2.0	6.0
					304	32.0	35.0	35.0	37.0	3.0	3.0	0.0	3.0	0.0	3.0
					401	41.0	34.0	31.0	36.0	3.0	1.0	4.0	4.0	1.0	4.0
					Mean =	35.0	32.3	33.3	34.3	2.3	2.0	2.3	3.0	1.0	4.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	31.0	32.0	31.0	29.0	3.0	2.0	1.0	1.0	4.0	3.0
					218	32.0	27.0	38.0	36.0	2.0	3.0	4.0	2.0	0.0	2.0
					319	40.0	32.0	35.0	31.0	3.0	2.0	4.0	1.0	2.0	3.0
					416	30.0	31.0	31.0	32.0	3.0	3.0	1.0	2.0	3.0	3.0
					Mean =	33.3	30.5	33.8	32.0	2.8	2.5	2.5	1.5	2.3	2.8
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	30.0	28.0	29.0	38.0	3.0	1.0	3.0	1.0	4.0	3.0
					207	33.0	35.0	36.0	34.0	3.0	3.0	4.0	2.0	4.0	3.0
					316	34.0	31.0	33.0	27.0	0.0	0.0	0.0	0.0	0.0	4.0
					403	35.0	34.0	40.0	34.0	3.0	3.0	4.0	3.0	3.0	5.0
					Mean =	33.0	32.0	34.5	33.3	2.3	1.8	2.8	1.5	2.8	3.8
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	32.0	31.0	33.0	31.0	3.0	3.0	3.0	3.0	4.0	3.0
					208	35.0	37.0	36.0	38.0	1.0	2.0	2.0	4.0	3.0	5.0
					320	34.0	29.0	31.0	36.0	4.0	3.0	4.0	4.0	4.0	4.0
					410	31.0	34.0	33.0	38.0	4.0	4.0	4.0	4.0	3.0	4.0
					Mean =	33.0	32.8	33.3	35.8	3.0	3.0	3.3	3.8	3.5	4.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -
Rating Data Type					HEIGHT	HEIGHT	HEIGHT	HEIGHT	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET
Rating Unit					CM	CM	CM	CM	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT
Rating Date					8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/8/2011
Trt-Eval Interval					28DAT	28DAT	28DAT	28DAT	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	2WAFLGUC
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	33	34	35	36	37	38	39	40	41	42
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	36.0	36.0	29.0	37.0	0.0	0.0	0.0	0.0	0.0	2.0
					211	31.0	25.0	27.0	30.0	0.0	0.0	0.0	0.0	0.0	3.0
					315	34.0	30.0	39.0	35.0	0.0	0.0	0.0	0.0	0.0	5.0
					417	34.0	34.0	31.0	28.0	0.0	0.0	0.0	0.0	0.0	2.0
					Mean =	33.8	31.3	31.5	32.5	0.0	0.0	0.0	0.0	0.0	3.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	35.0	33.0	35.0	33.0	2.0	2.0	3.0	3.0	2.0	3.0
					204	28.0	31.0	38.0	34.0	1.0	2.0	1.0	0.0	0.0	1.0
					312	28.0	33.0	26.0	34.0	2.0	3.0	0.0	2.0	1.0	2.0
					409	34.0	37.0	32.0	27.0	0.0	0.0	0.0	0.0	1.0	2.0
					Mean =	31.3	33.5	32.8	32.0	1.3	1.8	1.0	1.3	1.0	2.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	34.0	36.0	36.0	35.0	1.0	0.0	0.0	1.0	0.0	5.0
					221	26.0	31.0	32.0	30.0	2.0	2.0	1.0	1.0	3.0	2.0
					303	31.0	31.0	26.0	28.0	2.0	1.0	0.0	3.0	1.0	2.0
					408	31.0	32.0	27.0	20.0	0.0	2.0	2.0	4.0	3.0	0.0
					Mean =	30.5	32.5	30.3	28.3	1.3	1.3	0.8	2.3	1.8	2.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	31.0	33.0	35.0	32.0	1.0	3.0	3.0	0.0	1.0	1.0
					213	31.0	30.0	31.0	36.0	1.0	1.0	2.0	2.0	2.0	2.0
					301	32.0	36.0	27.0	32.0	1.0	0.0	1.0	1.0	2.0	2.0
					402	34.0	37.0	38.0	40.0	0.0	2.0	2.0	1.0	1.0	3.0
					Mean =	32.0	34.0	32.8	35.0	0.8	1.5	2.0	1.0	1.5	2.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	26.0	27.0	30.0	33.0	4.0	2.0	4.0	4.0	4.0	4.0
					205	34.0	34.0	32.0	36.0	4.0	3.0	3.0	4.0	4.0	7.0
					308	40.0	36.0	31.0	38.0	4.0	3.0	2.0	2.0	2.0	4.0
					418	31.0	29.0	30.0	31.0	3.0	2.0	1.0	2.0	4.0	3.0
					Mean =	32.8	31.5	30.8	34.5	3.8	2.5	2.5	3.0	3.5	4.5
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	33.0	32.0	29.0	28.0	2.0	2.0	2.0	4.0	4.0	5.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	34.0	33.0	30.0	37.0	3.0	1.0	1.0	1.0	1.0	3.0
					307	35.0	36.0	34.0	37.0	1.0	2.0	1.0	0.0	3.0	2.0
					413	29.0	42.0	33.0	40.0	0.0	2.0	0.0	2.0	0.0	3.0
					Mean =	32.8	35.8	31.5	35.5	1.5	1.8	1.0	1.8	2.0	3.3

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 8/2/2011 28DAT - 1	PEPPER PLANT3 - HEIGHT CM 8/2/2011 28DAT - 1	PEPPER PLANT4 - HEIGHT CM 8/2/2011 28DAT - 1	PEPPER PLANT5 - HEIGHT CM 8/2/2011 28DAT - 1	PEPPER PLANT1 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1	PEPPER PLANT1 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC
						33	34	35	36	37	38	39	40	41	42
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	33.0	35.0	30.0	35.0	3.0	2.0	2.0	1.0	2.0	4.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	34.0	33.0	33.0	32.0	1.0	2.0	4.0	2.0	0.0	2.0
					306	34.0	35.0	35.0	38.0	1.0	1.0	3.0	0.0	1.0	1.0
					407	34.0	33.0	29.0	34.0	3.0	3.0	4.0	1.0	2.0	3.0
					Mean =	33.8	34.0	31.8	34.8	2.0	2.0	3.3	1.0	1.3	2.5
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	33.0	34.0	34.0	35.0	3.0	4.0	4.0	4.0	4.0	3.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	38.0	29.0	32.0	30.0	3.0	4.0	3.0	1.0	3.0	4.0
					305	34.0	33.0	34.0	34.0	0.0	2.0	3.0	0.0	3.0	2.0
					411	34.0	30.0	31.0	35.0	4.0	4.0	4.0	4.0	4.0	4.0
					Mean =	34.8	31.5	32.8	33.5	2.5	3.5	3.5	2.3	3.5	3.3
15	UNTREATED CONTROL				115	32.0	33.0	31.0	33.0	0.0	0.0	2.0	1.0	2.0	5.0
					203	30.0	33.0	34.0	36.0	4.0	3.0	3.0	4.0	3.0	4.0
					317	34.0	26.0	33.0	35.0	0.0	0.0	0.0	0.0	0.0	4.0
					405	35.0	35.0	34.0	36.0	4.0	3.0	0.0	2.0	3.0	4.0
					Mean =	32.8	31.8	33.0	35.0	2.0	1.5	1.3	1.8	2.0	4.3
16	Clarity (1x)	0.5	lb ae/a	B	116	19.0	21.0	25.0	24.0	0.0	0.0	0.0	0.0	0.0	1.0
					215	13.0	17.0	13.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	13.0	16.0	16.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	17.0	15.0	15.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	15.5	17.3	17.3	16.8	0.0	0.0	0.0	0.0	0.0	0.3
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	37.0	37.0	33.0	34.0	3.0	4.0	2.0	4.0	2.0	6.0
					210	31.0	33.0	30.0	37.0	4.0	2.0	2.0	4.0	2.0	4.0
					302	34.0	34.0	32.0	28.0	3.0	3.0	3.0	4.0	4.0	3.0
					412	34.0	36.0	32.0	35.0	2.0	4.0	3.0	4.0	4.0	4.0
					Mean =	34.0	35.0	31.8	33.5	3.0	3.3	2.5	4.0	3.0	4.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	36.0	34.0	38.0	35.0	4.0	3.0	4.0	3.0	4.0	4.0
					214	32.0	33.0	36.0	37.0	2.0	2.0	3.0	4.0	2.0	3.0
					309	34.0	37.0	34.0	32.0	3.0	1.0	4.0	4.0	3.0	4.0
					421	34.0	31.0	32.0	29.0	4.0	4.0	4.0	4.0	3.0	4.0
					Mean =	34.0	33.8	35.0	33.3	3.3	2.5	3.8	3.8	3.0	3.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - HEIGHT CM 8/2/2011 28DAT - 1 (33)	PEPPER PLANT3 - HEIGHT CM 8/2/2011 28DAT - 1 (34)	PEPPER PLANT4 - HEIGHT CM 8/2/2011 28DAT - 1 (35)	PEPPER PLANT5 - HEIGHT CM 8/2/2011 28DAT - 1 (36)	PEPPER PLANT1 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1 (37)	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1 (38)	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1 (39)	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1 (40)	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/2/2011 1WAFLGUC - 1 (41)	PEPPER PLANT1 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC (42)
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	36.0	40.0	29.0	31.0	0.0	2.0	0.0	1.0	0.0	2.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	33.0	33.0	35.0	32.0	0.0	0.0	0.0	0.0	0.0	2.0
					311	30.0	32.0	29.0	31.0	0.0	2.0	1.0	1.0	3.0	3.0
					420	31.0	28.0	31.0	35.0	1.0	1.0	2.0	1.0	0.0	1.0
					Mean =	32.5	33.3	31.0	32.3	0.3	1.3	0.8	0.8	0.8	2.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	32.0	28.0	31.0	34.0	3.0	3.0	1.0	3.0	2.0	4.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	36.0	36.0	36.0	32.0	2.0	1.0	1.0	4.0	2.0	2.0
					313	34.0	31.0	33.0	32.0	2.0	2.0	3.0	2.0	4.0	2.0
					414	35.0	31.0	35.0	34.0	0.0	2.0	0.0	0.0	0.0	4.0
					Mean =	34.3	31.5	33.8	33.0	1.8	2.0	1.3	2.3	2.0	3.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	33.0	37.0	33.0	29.0	2.0	3.0	0.0	2.0	4.0	2.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	36.0	32.0	39.0	30.0	3.0	1.0	3.0	3.0	2.0	3.0
					314	31.0	32.0	34.0	36.0	3.0	1.0	3.0	3.0	4.0	4.0
					419	26.0	29.0	26.0	26.0	4.0	4.0	3.0	1.0	0.0	4.0
					Mean =	31.5	32.5	33.0	30.3	3.0	2.3	2.3	2.3	2.5	3.3

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 43	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 44	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 45	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 46	PEPPER PLANT1 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0 47	PEPPER PLANT1 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1 48	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0 49	PEPPER PLANT1 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1 50	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 0 51	PEPPER PLANT1 - GRADE2 WT/grams 8/16/2011 HARVEST1 - 1 52
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					219	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					321	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					404	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					Mean =	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	6.0	1.0	1.0	4.0	0	0.0	0	0.0	1	223.0
					220	4.0	8.0	7.0	8.0	0	0.0	0	0.0	0	0.0
					310	5.0	3.0	2.0	2.0	1	313.0	1	67.0	0	0.0
					406	5.0	5.0	6.0	6.0	1	338.0	0	0.0	0	0.0
					Mean =	5.0	4.3	4.0	5.0	1	162.8	0	16.8	0	55.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	4.0	2.0	4.0	1.0	0	0.0	3	422.0	0	0.0
					217	2.0	3.0	2.0	3.0	0	0.0	0	0.0	0	0.0
					304	3.0	5.0	3.0	5.0	1	267.0	1	111.0	0	0.0
					401	4.0	3.0	3.0	3.0	1	354.0	0	0.0	1	150.0
					Mean =	3.3	3.3	3.0	3.0	1	155.3	1	133.3	0	37.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	2.0	2.0	3.0	4.0	2	532.0	1	180.0	0	0.0
					218	4.0	3.0	2.0	3.0	0	0.0	0	0.0	2	281.0
					319	3.0	4.0	1.0	3.0	2	497.0	1	247.0	0	0.0
					416	3.0	1.0	2.0	3.0	2	528.0	1	181.0	0	0.0
					Mean =	3.0	2.5	2.0	3.3	2	389.3	1	152.0	1	70.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	2.0	2.0	2.0	4.0	1	238.0	2	231.0	0	0.0
					207	4.0	4.0	2.0	3.0	1	263.0	2	348.0	0	0.0
					316	5.0	4.0	1.0	1.0	0	0.0	0	0.0	0	0.0
					403	4.0	4.0	3.0	3.0	1	187.0	1	126.0	1	184.0
					Mean =	3.8	3.5	2.0	2.8	1	172.0	1	176.3	0	46.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	4.0	4.0	4.0	4.0	0	0.0	2	390.0	0	0.0
					208	3.0	3.0	4.0	5.0	1	279.0	0	0.0	0	0.0
					320	3.0	3.0	4.0	4.0	1	251.0	2	289.0	0	0.0
					410	5.0	4.0	3.0	3.0	0	0.0	2	278.0	0	0.0
					Mean =	3.8	3.5	3.8	4.0	1	132.5	2	239.3	0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 43	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 44	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 45	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC 46	PEPPER PLANT1 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0 47	PEPPER PLANT1 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1 48	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0 49	PEPPER PLANT1 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1 50	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 0 51	PEPPER PLANT1 - GRADE2 WT/grams 8/16/2011 HARVEST1 - 1 52
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	4.0	3.0	2.0	1.0	0	0.0	0	0.0	0	0.0
					211	1.0	1.0	2.0	0.0	0	0.0	0	0.0	0	0.0
					315	6.0	8.0	1.0	3.0	0	0.0	0	0.0	0	0.0
					417	3.0	2.0	3.0	1.0	0	0.0	0	0.0	0	0.0
					Mean =	3.5	3.5	2.0	1.3	0	0.0	0	0.0	0	0.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	2.0	3.0	3.0	2.0	1	303.0	2	272.0	0	0.0
					204	2.0	1.0	3.0	1.0	1	280.0	0	0.0	0	0.0
					312	3.0	0.0	2.0	1.0	2	534.0	0	0.0	0	0.0
					409	3.0	0.0	1.0	1.0	0	0.0	0	0.0	0	0.0
					Mean =	2.5	1.0	2.3	1.3	1	279.3	1	68.0	0	0.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	2.0	3.0	1.0	4.0	0	0.0	1	173.0	0	0.0
					221	1.0	2.0	1.0	3.0	1	262.0	1	138.0	0	0.0
					303	1.0	1.0	4.0	1.0	2	569.0	0	0.0	0	0.0
					408	2.0	3.0	4.0	3.0	0	0.0	0	0.0	0	0.0
					Mean =	1.5	2.3	2.5	2.8	1	207.8	1	77.8	0	0.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	3.0	4.0	0.0	2.0	1	291.0	0	0.0	0	0.0
					213	1.0	3.0	2.0	2.0	1	299.0	0	0.0	0	0.0
					301	1.0	5.0	1.0	2.0	1	370.0	0	0.0	0	0.0
					402	2.0	2.0	1.0	0.0	0	0.0	1	85.0	0	0.0
					Mean =	1.8	3.5	1.0	1.5	1	240.0	0	21.3	0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	2.0	4.0	4.0	4.0	2	491.0	2	257.0	0	0.0
					205	3.0	3.0	4.0	4.0	0	0.0	3	594.0	0	0.0
					308	4.0	3.0	3.0	3.0	1	260.0	3	421.0	0	0.0
					418	3.0	1.0	2.0	4.0	1	318.0	2	360.0	0	0.0
					Mean =	3.0	2.8	3.3	3.8	1	267.3	3	408.0	0	0.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	2.0	2.0	4.0	4.0	0	0.0	0	0.0	1	101.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	2.0	1.0	3.0	3.0	2	571.0	1	137.0	0	0.0
					307	3.0	1.0	1.0	3.0	0	0.0	2	377.0	0	0.0
					413	2.0	2.0	2.0	3.0	0	0.0	0	0.0	0	0.0
					Mean =	2.3	1.5	2.5	3.3	1	142.8	1	128.5	0	25.3

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT1 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - GRADE2 WT/grams 8/16/2011 HARVEST1 - 1
						43	44	45	46	47	48	49	50	51	52
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	2.0	2.0	2.0	4.0	0	0.0	3	358.0	0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	4.0	4.0	4.0	7.0	0	0.0	0	0.0	0	0.0
					306	5.0	4.0	4.0	4.0	0	0.0	1	253.0	0	0.0
					407	4.0	4.0	1.0	5.0	2	607.0	1	159.0	0	0.0
					Mean =	3.8	3.5	2.8	5.0	1	151.8	1	192.5	0	0.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	4.0	4.0	4.0	4.0	2	592.0	1	137.0	0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	4.0	3.0	4.0	4.0	1	298.0	2	349.0	0	0.0
					305	2.0	4.0	8.0	7.0	0	0.0	0	0.0	0	0.0
					411	4.0	4.0	4.0	4.0	1	293.0	3	517.0	0	0.0
					Mean =	3.5	3.8	5.0	4.8	1	295.8	2	250.8	0	0.0
15	UNTREATED CONTROL				115	2.0	1.0	2.0	2.0	0	0.0	0	0.0	0	0.0
					203	4.0	4.0	5.0	3.0	1	286.0	3	508.0	0	0.0
					317	3.0	4.0	0.0	4.0	0	0.0	0	0.0	0	0.0
					405	6.0	0.0	2.0	3.0	1	228.0	2	340.0	0	0.0
					Mean =	3.8	2.3	2.3	3.0	1	128.5	1	212.0	0	0.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	1.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					215	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					318	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					415	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0
					Mean =	0.0	0.3	0.0	0.0	0	0.0	0	0.0	0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	3.0	10.0	4.0	5.0	0	0.0	2	282.0	1	99.0
					210	3.0	3.0	4.0	3.0	0	0.0	3	510.0	0	0.0
					302	3.0	3.0	4.0	3.0	0	0.0	0	0.0	2	202.0
					412	4.0	3.0	4.0	4.0	4	897.0	1	173.0	0	0.0
					Mean =	3.3	4.8	4.0	3.8	1	224.3	2	241.3	1	75.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	2.0	3.0	7.0	4.0	1	298.0	3	431.0	0	0.0
					214	2.0	3.0	4.0	5.0	1	207.0	1	180.0	0	0.0
					309	4.0	6.0	4.0	2.0	2	523.0	0	0.0	0	0.0
					421	3.0	4.0	5.0	4.0	0	0.0	4	628.0	0	0.0
					Mean =	2.8	4.0	5.0	3.8	1	257.0	2	309.8	0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT3 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT4 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT5 - FRUIT SET NO/PLANT 8/8/2011 2WAFLGUC	PEPPER PLANT1 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT1 - GRADE2 WT/grams 8/16/2011 HARVEST1 - 1
						43	44	45	46	47	48	49	50	51	52
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	2.0	0.0	1.0	3.0	0	0.0	0	0.0	0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	1.0	6.0	1.0	1.0	0	0.0	0	0.0	1	75.0
					311	3.0	1.0	1.0	3.0	0	0.0	0	0.0	0	0.0
					420	2.0	3.0	1.0	0.0	1	353.0	0	0.0	0	0.0
					Mean =	2.0	2.5	1.0	1.8	0	88.3	0	0.0	0	18.8
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	3.0	1.0	3.0	3.0	0	0.0	4	564.0	0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	1.0	3.0	4.0	3.0	1	334.0	1	151.0	0	0.0
					313	3.0	4.0	3.0	4.0	1	403.0	1	176.0	0	0.0
					414	5.0	4.0	2.0	4.0	0	0.0	0	0.0	0	0.0
					Mean =	3.0	3.0	3.0	3.5	1	184.3	2	222.8	0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	4.0	4.0	2.0	4.0	1	292.0	2	335.0	0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	4.0	4.0	4.0	3.0	1	309.0	1	135.0	0	0.0
					314	3.0	3.0	3.0	5.0	1	236.0	3	427.0	0	0.0
					419	4.0	3.0	2.0	2.0	1	256.0	2	275.0	0	0.0
					Mean =	3.8	3.5	2.8	3.5	1	273.3	2	293.0	0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -
Rating Data Type					US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
Trt-Eval Interval					HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
# Subsamples, Dec.					- 0	- 1	- 0	- 1	- 1					
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	53	54	55	56	57	58	59	60	61	62
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0	0.0	0	0.0	0.0	0.0	1.0	328.0	0.0	0.0
					220	0	0.0	1	79.0	0.0	0.0	0.0	0.0	0.0	0.0
					310	0	0.0	1	84.0	0.0	0.0	0.0	0.0	0.0	0.0
					406	0	0.0	0	0.0	0.0	0.0	0.0	0.0	1.0	174.0
					Mean =	0	0.0	1	40.8	0.0	0.0	0.3	82.0	0.3	43.5
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	1	307.0	0	0.0	0.0	0.0	1.0	317.0	1.0	179.0
					217	1	300.0	0	0.0	0.0	0.0	0.0	0.0	3.0	521.0
					304	1	321.0	1	133.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	1	376.0	2	191.0	0.0	0.0	2.0	442.0	2.0	334.0
					Mean =	1	326.0	1	81.0	0.0	0.0	0.8	189.8	1.5	258.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	1	339.0	1	151.0	0.0	0.0	1.0	294.0	0.0	0.0
					218	0	0.0	2	340.0	0.0	0.0	1.0	250.0	2.0	210.0
					319	1	270.0	0	0.0	2.0	245.0	2.0	532.0	1.0	212.0
					416	1	309.0	2	330.0	0.0	0.0	1.0	369.0	0.0	0.0
					Mean =	1	229.5	1	205.3	0.5	61.3	1.3	361.3	0.8	105.5
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0	0.0	0	0.0	0.0	0.0	1.0	291.0	2.0	211.0
					207	0	0.0	4	645.0	0.0	0.0	0.0	0.0	3.0	641.0
					316	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	1	252.0	1	157.0	0.0	0.0	2.0	454.0	2.0	329.0
					Mean =	0	63.0	1	200.5	0.0	0.0	0.8	186.3	1.8	295.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	1	281.0	1	94.0	0.0	0.0	0.0	0.0	4.0	524.0
					208	1	278.0	0	0.0	1.0	141.0	0.0	0.0	2.0	176.0
					320	1	298.0	2	367.0	0.0	0.0	1.0	204.0	3.0	611.0
					410	1	265.0	0	0.0	0.0	0.0	1.0	278.0	2.0	312.0
					Mean =	1	280.5	1	115.3	0.3	35.3	0.5	120.5	2.8	405.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT2 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT2 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT3 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE1 WT/grams 8/16/2011 HARVEST1
						53	54	55	56	57	58	59	60	61	62
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0	0.0	0	0.0	2.0	129.0	0.0	0.0	0.0	0.0
					211	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					315	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					417	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0.0	0	0.0	0.5	32.3	0.0	0.0	0.0	0.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	2	616.0	0	0.0	0.0	0.0	1.0	296.0	2.0	363.0
					204	1	344.0	1	160.0	0.0	0.0	1.0	384.0	0.0	0.0
					312	0	0.0	3	500.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1	240.0	1	165.0	0.0	0.0	0.5	170.0	0.5	90.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	2	489.0	0	0.0	0.0	0.0	1.0	356.0	0.0	0.0
					303	1	406.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	1	415.0	1	199.0	0.0	0.0	2.0	494.0	1.0	189.0
					Mean =	1	327.5	0	49.8	0.0	0.0	0.8	212.5	0.3	47.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	1	279.0	1	201.0	0.0	0.0	1.0	333.0	0.0	0.0
					213	1	351.0	0	0.0	0.0	0.0	2.0	519.0	1.0	150.0
					301	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	2	660.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1	322.5	0	50.3	0.0	0.0	0.8	213.0	0.3	37.5
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0	0.0	0	0.0	1.0	137.0	1.0	247.0	1.0	100.0
					205	1	285.0	2	243.0	0.0	0.0	0.0	0.0	2.0	289.0
					308	0	0.0	2	251.0	0.0	0.0	2.0	562.0	0.0	0.0
					418	0	0.0	2	278.0	0.0	0.0	1.0	317.0	0.0	0.0
					Mean =	0	71.3	2	193.0	0.3	34.3	1.0	281.5	0.8	97.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0	0.0	0	0.0	0.0	0.0	1.0	289.0	1.0	176.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	1	322.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0	0.0	0	0.0	1.0	106.0	1.0	348.0	0.0	0.0
					413	1	340.0	0	0.0	1.0	107.0	0.0	0.0	0.0	0.0
					Mean =	1	165.5	0	0.0	0.5	53.3	0.5	159.3	0.3	44.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT2 - US FANCY WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1 - 0	PEPPER PLANT2 - GRADE1 WT/grams 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1 - 1	PEPPER PLANT2 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT3 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE1 WT/grams 8/16/2011 HARVEST1
						53	54	55	56	57	58	59	60	61	62
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	1	247.0	1	191.0	0.0	0.0	0.0	0.0	2.0	385.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	1	248.0	0	0.0	1.0	74.0	0.0	0.0	3.0	401.0
					306	0	0.0	2	307.0	0.0	0.0	0.0	0.0	2.0	360.0
					407	2	587.0	2	326.0	0.0	0.0	1.0	262.0	3.0	541.0
					Mean =	1	270.5	1	206.0	0.3	18.5	0.3	65.5	2.5	421.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	1	299.0	2	241.0	0.0	0.0	1.0	281.0	3.0	411.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	1	242.0	3	293.0	0.0	0.0	1.0	298.0	3.0	540.0
					305	0	0.0	2	339.0	0.0	0.0	1.0	301.0	2.0	226.0
					411	1	303.0	3	455.0	0.0	0.0	0.0	0.0	4.0	635.0
					Mean =	1	211.0	3	332.0	0.0	0.0	0.8	220.0	3.0	453.0
15	UNTREATED CONTROL				115	0	0.0	0	0.0	0.0	0.0	1.0	359.0	0.0	0.0
					203	0	0.0	3	390.0	0.0	0.0	0.0	0.0	3.0	455.0
					317	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					405	3	754.0	1	99.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1	188.5	1	122.3	0.0	0.0	0.3	89.8	0.8	113.8
16	Clarity (1x)	0.5	lb ae/a	B	116	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0	0.0	3	411.0	0.0	0.0	0.0	0.0	1.0	88.0
					210	1	273.0	1	114.0	0.0	0.0	1.0	311.0	3.0	306.0
					302	1	255.0	0	0.0	0.0	0.0	1.0	277.0	0.0	0.0
					412	0	0.0	3	501.0	0.0	0.0	1.0	267.0	1.0	173.0
					Mean =	1	132.0	2	256.5	0.0	0.0	0.8	213.8	1.3	141.8
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	1	274.0	0	0.0	0.0	0.0	0.0	0.0	2.0	439.0
					214	1	248.0	0	0.0	0.0	0.0	1.0	244.0	2.0	385.0
					309	0	0.0	1	129.0	0.0	0.0	0.0	0.0	0.0	0.0
					421	1	254.0	2	373.0	0.0	0.0	1.0	244.0	3.0	340.0
					Mean =	1	194.0	1	125.5	0.0	0.0	0.5	122.0	1.8	291.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	53	54	55	56	57	58	59	60	61	62
	Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated					PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -
	Rating Data Type					US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1
	Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
	Rating Date					8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
	Trt-Eval Interval					HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
	# Subsamples, Dec.					- 0	- 1	- 0	- 1	- 1					
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	1	309.0	1	150.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					311	1	251.0	2	266.0	0.0	0.0	1.0	309.0	0.0	0.0
					420	1	363.0	0	0.0	0.0	0.0	0.0	0.0	2.0	302.0
					Mean =	1	230.8	1	104.0	0.0	0.0	0.3	77.3	0.5	75.5
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0	0.0	2	450.0	1.0	103.0	1.0	328.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	1	139.0	0	0.0	0.0	0.0	1.0	300.0	2.0	168.0
					313	1	289.0	2	221.0	0.0	0.0	0.0	0.0	4.0	497.0
					414	1	276.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1	176.0	1	167.8	0.3	25.8	0.5	157.0	1.5	166.3
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0	0.0	2	373.0	1.0	155.0	0.0	0.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	1	310.0	2	203.0	0.0	0.0	0.0	0.0	1.0	158.0
					314	0	0.0	0	0.0	0.0	0.0	0.0	0.0	3.0	709.0
					419	1	257.0	3	333.0	0.0	0.0	1.0	284.0	2.0	279.0
					Mean =	1	141.8	2	227.3	0.3	38.8	0.3	71.0	1.5	286.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY WT/grams 8/16/2011 HARVEST1
						63	64	65	66	67	68	69	70	71	72
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	1.0	294.0	0.0	0.0	0.0	0.0	0.0	0.0
					220	1.0	121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					310	0.0	0.0	1.0	289.0	0.0	0.0	0.0	0.0	1.0	299.0
					406	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	30.3	0.5	145.8	0.0	0.0	0.0	0.0	0.3	74.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	1.0	259.0	1.0	123.0	0.0	0.0	1.0	218.0
					217	0.0	0.0	1.0	256.0	0.0	0.0	0.0	0.0	1.0	278.0
					304	1.0	92.0	1.0	339.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	1.0	296.0	1.0	231.0	1.0	116.0	1.0	244.0
					Mean =	0.3	23.0	1.0	287.5	0.5	88.5	0.3	29.0	0.8	185.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	221.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	1.0	203.0	0.0	0.0
					319	0.0	0.0	1.0	379.0	0.0	0.0	0.0	0.0	2.0	684.0
					416	0.0	0.0	1.0	322.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	175.3	0.0	0.0	0.3	50.8	0.8	226.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	1.0	299.0	0.0	0.0	0.0	0.0	2.0	488.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	2.0	461.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	1.0	349.0	2.0	298.0	0.0	0.0	1.0	265.0
					Mean =	0.0	0.0	0.5	162.0	0.5	74.5	0.5	115.3	0.8	188.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	2.0	464.0	0.0	0.0	0.0	0.0	1.0	235.0
					208	0.0	0.0	1.0	298.0	2.0	236.0	1.0	123.0	0.0	0.0
					320	0.0	0.0	1.0	268.0	3.0	424.0	0.0	0.0	2.0	461.0
					410	0.0	0.0	2.0	475.0	0.0	0.0	0.0	0.0	2.0	598.0
					Mean =	0.0	0.0	1.5	376.3	1.3	165.0	0.3	30.8	1.3	323.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY WT/grams 8/16/2011 HARVEST1
						63	64	65	66	67	68	69	70	71	72
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					211	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					315	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	2.0	625.0	0.0	0.0	1.0	160.0	1.0	301.0
					204	0.0	0.0	0.0	0.0	2.0	138.0	0.0	0.0	0.0	0.0
					312	0.0	0.0	2.0	583.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	357.0
					Mean =	0.0	0.0	1.0	302.0	0.5	34.5	0.3	40.0	0.5	164.5
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	1.0	271.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	0.0	0.0	1.0	310.0	0.0	0.0	0.0	0.0	2.0	619.0
					303	0.0	0.0	0.0	0.0	3.0	496.0	0.0	0.0	1.0	373.0
					408	0.0	0.0	1.0	228.0	3.0	487.0	0.0	0.0	1.0	242.0
					Mean =	0.0	0.0	0.8	202.3	1.5	245.8	0.0	0.0	1.0	308.5
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	344.0
					213	0.0	0.0	1.0	319.0	1.0	167.0	0.0	0.0	1.0	349.0
					301	1.0	92.0	0.0	0.0	1.0	199.0	0.0	0.0	0.0	0.0
					402	1.0	190.0	1.0	372.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	70.5	0.5	172.8	0.5	91.5	0.0	0.0	0.5	173.3
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	1.0	273.0	2.0	222.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	4.0	572.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	3.0	765.0	1.0	150.0	0.0	0.0	3.0	947.0
					418	0.0	0.0	1.0	276.0	1.0	155.0	0.0	0.0	2.0	437.0
					Mean =	0.0	0.0	1.3	328.5	2.0	274.8	0.0	0.0	1.3	346.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	1.0	236.0	3.0	329.0	0.0	0.0	1.0	254.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	1.0	235.0	0.0	0.0	0.0	0.0	1.0	206.0	1.0	370.0
					307	0.0	0.0	1.0	325.0	0.0	0.0	0.0	0.0	2.0	525.0
					413	0.0	0.0	2.0	631.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	58.8	1.0	298.0	0.8	82.3	0.3	51.5	1.0	287.3

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY WT/grams 8/16/2011 HARVEST1
						63	64	65	66	67	68	69	70	71	72
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	1.0	216.0	0.0	0.0	0.0	0.0	1.0	260.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	1.0	235.0	1.0	176.0	0.0	0.0	0.0	0.0
					306	1.0	72.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	350.0
					407	0.0	0.0	1.0	358.0	0.0	0.0	0.0	0.0	1.0	337.0
					Mean =	0.3	18.0	0.8	202.3	0.3	44.0	0.0	0.0	0.8	236.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	3.0	498.0	0.0	0.0	3.0	662.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	1.0	263.0	2.0	152.0	0.0	0.0	1.0	287.0
					305	0.0	0.0	0.0	0.0	1.0	103.0	0.0	0.0	1.0	256.0
					411	0.0	0.0	1.0	333.0	3.0	480.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	149.0	2.3	308.3	0.0	0.0	1.3	301.3
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	1.0	168.0	1.0	324.0
					203	0.0	0.0	1.0	248.0	2.0	251.0	0.0	0.0	1.0	303.0
					317	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					405	0.0	0.0	1.0	224.0	1.0	185.0	1.0	186.0	2.0	511.0
					Mean =	0.0	0.0	0.5	118.0	0.8	109.0	0.5	88.5	1.0	284.5
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	4.0	430.0	0.0	0.0	1.0	252.0
					210	0.0	0.0	1.0	267.0	3.0	445.0	0.0	0.0	1.0	307.0
					302	2.0	185.0	0.0	0.0	4.0	842.0	0.0	0.0	1.0	253.0
					412	0.0	0.0	1.0	254.0	3.0	436.0	0.0	0.0	2.0	516.0
					Mean =	0.5	46.3	0.5	130.3	3.5	538.3	0.0	0.0	1.3	332.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	1.0	106.0	0.0	0.0	0.0	0.0
					214	1.0	132.0	1.0	263.0	3.0	429.0	0.0	0.0	0.0	0.0
					309	0.0	0.0	0.0	0.0	2.0	267.0	0.0	0.0	1.0	336.0
					421	0.0	0.0	0.0	0.0	4.0	495.0	0.0	0.0	1.0	250.0
					Mean =	0.3	33.0	0.3	65.8	2.5	324.3	0.0	0.0	0.5	146.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT3 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY WT/grams 8/16/2011 HARVEST1
						63	64	65	66	67	68	69	70	71	72
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	1.0	305.0	0.0	0.0	0.0	0.0	2.0	598.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					311	0.0	0.0	1.0	368.0	0.0	0.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	1.0	281.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	238.5	0.0	0.0	0.0	0.0	0.5	149.5
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	1.0	296.0	1.0	183.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	1.0	281.0	3.0	465.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	1.0	389.0	0.0	0.0	1.0	98.0	0.0	0.0
					414	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	241.5	1.0	162.0	0.3	24.5	0.0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	2.0	145.0	1.0	275.0	3.0	486.0	0.0	0.0	2.0	571.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	1.0	249.0	1.0	315.0	2.0	275.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	2.0	585.0	0.0	0.0	0.0	0.0	2.0	540.0
					419	0.0	0.0	0.0	0.0	1.0	158.0	1.0	78.0	0.0	0.0
					Mean =	0.8	98.5	1.0	293.8	1.5	229.8	0.3	19.5	1.0	277.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT1 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE2 WT/grams 8/25/2011 HARVEST2
						73	74	75	76	77	78	79	80	81	82
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	1.0	85.0	0.0	0.0	0.0	0.0	1.0	82.0	0.0	0.0
					220	0.0	0.0	0.0	0.0	0.0	0.0	4.0	422.0	0.0	0.0
					310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					406	0.0	0.0	0.0	0.0	0.0	0.0	1.0	73.0	0.0	0.0
					Mean =	0.3	21.3	0.0	0.0	0.0	0.0	1.5	144.3	0.0	0.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	3.0	326.0	0.0	0.0	0.0	0.0	2.0	246.0	0.0	0.0
					217	0.0	0.0	2.0	259.0	0.0	0.0	0.0	0.0	1.0	96.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	2.0	633.0	2.0	409.0	0.0	0.0
					Mean =	0.8	81.5	0.5	64.8	0.5	158.3	1.0	163.8	0.3	24.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	3.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	1.0	113.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					416	3.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.8	248.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	1.0	223.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	3.0	611.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	1.0	214.0	1.0	214.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.3	262.0	0.3	53.5	0.0	0.0	0.0	0.0	0.0	0.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	3.0	451.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	4.0	503.0	1.0	204.0	0.0	0.0	3.0	408.0	0.0	0.0
					320	2.0	355.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	2.3	327.3	0.3	51.0	0.0	0.0	0.8	102.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT1 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE2 WT/grams 8/25/2011 HARVEST2
						73	74	75	76	77	78	79	80	81	82
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	0.0	0.0	0.0	0.0	3.0	319.0	1.0	54.0
					211	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					315	0.0	0.0	0.0	0.0	0.0	0.0	2.0	152.0	2.0	181.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	1.0	140.0	1.0	137.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	1.5	152.8	1.0	93.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	1.0	234.0	0.0	0.0	1.0	415.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	2.0	248.0	0.0	0.0
					312	1.0	243.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	2.0	189.0	0.0	0.0
					Mean =	0.5	119.3	0.0	0.0	0.3	103.8	1.0	109.3	0.0	0.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	0.0	0.0	0.0	0.0	3.0	306.0	1.0	140.0
					221	0.0	0.0	1.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	2.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	80.0	0.3	17.3	0.0	0.0	0.8	76.5	0.3	35.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	1.0	165.0	0.0	0.0	1.0	118.0	0.0	0.0
					301	2.0	426.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	106.5	0.3	41.3	0.0	0.0	0.3	29.5	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	3.0	510.0	0.0	0.0	1.0	252.0	3.0	509.0	0.0	0.0
					205	2.0	395.0	2.0	223.0	0.0	0.0	1.0	171.0	0.0	0.0
					308	1.0	82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					418	2.0	398.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	2.0	346.3	0.5	55.8	0.3	63.0	1.0	170.0	0.0	0.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	2.0	282.0	0.0	0.0	1.0	333.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					413	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	70.5	0.0	0.0	0.3	83.3	0.0	0.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT1 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE2 WT/grams 8/25/2011 HARVEST2
						73	74	75	76	77	78	79	80	81	82
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	3.0	342.0	0.0	0.0	0.0	0.0	2.0	183.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	1.0	74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					407	1.0	199.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.3	153.8	0.0	0.0	0.0	0.0	0.5	45.8	0.0	0.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	1.0	216.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	1.0	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	4.0	386.0	0.0	0.0	1.0	303.0	1.0	149.0	0.0	0.0
					411	4.0	721.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	2.5	347.0	0.0	0.0	0.3	75.8	0.3	37.3	0.0	0.0
15	UNTREATED CONTROL				115	1.0	196.0	0.0	0.0	0.0	0.0	4.0	429.0	0.0	0.0
					203	2.0	438.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	0.0	0.0	0.0	0.0	1.0	106.0	2.0	224.0
					405	1.0	174.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.0	202.0	0.0	0.0	0.0	0.0	1.3	133.8	0.5	56.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	2.0	251.0	0.0	0.0	0.0	0.0	3.0	422.0	0.0	0.0
					210	1.0	155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	1.0	103.0	1.0	268.0	0.0	0.0	0.0	0.0
					412	1.0	162.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.0	142.0	0.3	25.8	0.3	67.0	0.8	105.5	0.0	0.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	3.0	453.0	1.0	167.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	1.0	193.0	1.0	114.0	0.0	0.0	1.0	110.0	0.0	0.0
					309	1.0	176.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					421	2.0	292.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.8	278.5	0.5	70.3	0.0	0.0	0.3	27.5	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT1 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT1 - GRADE2 WT/grams 8/25/2011 HARVEST2
						73	74	75	76	77	78	79	80	81	82
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	1.0	123.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	88.0
					311	1.0	235.0	1.0	244.0	0.0	0.0	1.0	174.0	0.0	0.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	89.5	0.3	61.0	0.0	0.0	0.3	43.5	0.3	22.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	1.0	63.0	2.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	3.0	506.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	0.0	0.0	0.0	0.0	0.0	0.0	3.0	366.0	0.0	0.0
					Mean =	1.0	142.3	0.5	82.5	0.0	0.0	0.8	91.5	0.0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	3.0	483.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	70.0
					314	2.0	383.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					419	1.0	67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.5	233.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	17.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE1 WT/grams 8/25/2011 HARVEST2
						83	84	85	86	87	88	89	90	91	92
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	2.0	202.0	0.0	0.0	0.0	0.0	0.0	0.0
					220	0.0	0.0	3.0	299.0	0.0	0.0	0.0	0.0	4.0	420.0
					310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					406	0.0	0.0	1.0	131.0	0.0	0.0	0.0	0.0	4.0	411.0
					Mean =	0.0	0.0	1.5	158.0	0.0	0.0	0.0	0.0	2.0	207.8
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	176.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	1.0	333.0	2.0	275.0	1.0	236.0	1.0	435.0	1.0	169.0
					Mean =	0.3	83.3	0.5	68.8	0.3	59.0	0.3	108.8	0.5	86.3
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	1.0	72.0	0.0	0.0	1.0	184.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	1.0	132.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	33.0	0.3	18.0	0.0	0.0	0.3	46.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	1.0	170.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	2.0	284.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	113.5	0.0	0.0	0.0	0.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval # Subsamples, Dec.					PEPPER PLANT2 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE1 WT/grams 8/25/2011 HARVEST2
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	83	84	85	86	87	88	89	90	91	92
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	1.0	79.0	2.0	200.0	0.0	0.0	3.0	353.0
					211	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					315	0.0	0.0	2.0	189.0	0.0	0.0	0.0	0.0	1.0	146.0
					417	0.0	0.0	1.0	109.0	1.0	91.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	1.0	94.3	0.8	72.8	0.0	0.0	1.0	124.8
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	1.0	105.0	0.0	0.0	1.0	288.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	106.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	26.3	0.0	0.0	0.3	72.0	0.3	26.5
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	120.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	30.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	1.0	122.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	30.5	0.0	0.0	0.0	0.0	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	0.0	0.0	0.0	0.0	2.0	700.0	0.0	0.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	175.0	0.0	0.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	2.0	579.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	1.0	427.0	0.0	0.0
					413	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	144.8	0.0	0.0	0.0	0.0	0.3	106.8	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT2 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE1 WT/grams 8/25/2011 HARVEST2
						83	84	85	86	87	88	89	90	91	92
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	1.0	149.0	0.0	0.0	0.0	0.0	1.0	159.0
					306	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	37.3	0.0	0.0	0.0	0.0	0.3	39.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	1.0	175.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	1.0	308.0	3.0	568.0	0.0	0.0	3.0	808.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	77.0	1.0	185.8	0.0	0.0	0.8	202.0	0.0	0.0
15	UNTREATED CONTROL				115	0.0	0.0	2.0	197.0	0.0	0.0	0.0	0.0	1.0	78.0
					203	0.0	0.0	1.0	150.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	3.0	317.0	0.0	0.0	0.0	0.0	2.0	178.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	1.5	166.0	0.0	0.0	0.0	0.0	0.8	64.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	117.0
					210	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	29.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	2.0	213.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					309	0.0	0.0	3.0	377.0	0.0	0.0	0.0	0.0	5.0	637.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	1.3	147.5	0.0	0.0	0.0	0.0	1.3	159.3

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/25/2011 HARVEST2 (83)	PEPPER PLANT2 - US FANCY WT/grams 8/25/2011 HARVEST2 (84)	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2 (85)	PEPPER PLANT2 - GRADE1 WT/grams 8/25/2011 HARVEST2 (86)	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2 (87)	PEPPER PLANT2 - GRADE2 WT/grams 8/25/2011 HARVEST2 (88)	PEPPER PLANT3 - US FANCY FRUIT NO 8/25/2011 HARVEST2 (89)	PEPPER PLANT3 - US FANCY WT/grams 8/25/2011 HARVEST2 (90)	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2 (91)	PEPPER PLANT3 - GRADE1 WT/grams 8/25/2011 HARVEST2 (92)
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	1.0	167.0	0.0	0.0	0.0	0.0	2.0	277.0
					311	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	41.8	0.0	0.0	0.0	0.0	0.5	69.3
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	196.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	49.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	1.0	155.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	1.0	143.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	74.5	0.0	0.0	0.0	0.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY WT/grams 8/25/2011 HARVEST2
						93	94	95	96	97	98	99	100	101	102
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					220	0.0	0.0	0.0	0.0	3.0	304.0	0.0	0.0	0.0	0.0
					310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					406	0.0	0.0	0.0	0.0	4.0	429.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.8	183.3	0.0	0.0	0.0	0.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	2.0	347.0	0.0	0.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	0.0	0.0	1.0	163.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.8	127.5	0.0	0.0	0.0	0.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	2.0	291.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	1.0	164.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.8	113.8	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY WT/grams 8/25/2011 HARVEST2
						93	94	95	96	97	98	99	100	101	102
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	1.0	96.0	0.0	0.0	1.0	88.0	2.0	182.0	0.0	0.0
					211	0.0	0.0	0.0	0.0	2.0	274.0	0.0	0.0	1.0	244.0
					315	0.0	0.0	0.0	0.0	1.0	102.0	0.0	0.0	0.0	0.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	24.0	0.0	0.0	1.0	116.0	0.5	45.5	0.3	61.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	344.0
					204	0.0	0.0	0.0	0.0	2.0	213.0	0.0	0.0	0.0	0.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.5	53.3	0.0	0.0	0.3	86.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	1.0	149.0	0.0	0.0	0.0	0.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	37.3	0.0	0.0	0.0	0.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	1.0	313.0	2.0	440.0	0.0	0.0	2.0	744.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	78.3	0.5	110.0	0.0	0.0	0.5	186.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	0.0	0.0	1.0	182.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	758.0
					413	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	45.5	0.0	0.0	0.5	189.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY WT/grams 8/25/2011 HARVEST2
						93	94	95	96	97	98	99	100	101	102
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	1.0	93.0	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	23.3	0.0	0.0	0.0	0.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	1.0	228.0	2.0	344.0	1.0	125.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	57.0	0.5	86.0	0.3	31.3	0.0	0.0
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	0.0	0.0	1.0	122.0	0.0	0.0	0.0	0.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	30.5	0.0	0.0	0.0	0.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					210	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	1.0	85.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	21.3	0.0	0.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT3 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - US FANCY WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT4 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - US FANCY WT/grams 8/25/2011 HARVEST2
						93	94	95	96	97	98	99	100	101	102
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	1.0	195.0	0.0	0.0	1.0	240.0
					311	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	48.8	0.0	0.0	0.3	60.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	0.0	0.0	0.0	0.0	4.0	419.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.0	104.8	0.0	0.0	0.0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	1.0	144.0	0.0	0.0	1.0	89.0	1.0	103.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	36.0	0.0	0.0	0.3	22.3	0.3	25.8	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE2 WT/grams 8/31/2011 HARVEST3
						103	104	105	106	107	108	109	110	111	112
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	2.0	217.0	0.0	0.0	0.0	0.0	2.0	202.0	0.0	0.0
					220	6.0	482.0	1.0	71.0	0.0	0.0	0.0	0.0	0.0	0.0
					310	0.0	0.0	0.0	0.0	0.0	0.0	5.0	545.0	0.0	0.0
					406	3.0	235.0	0.0	0.0	0.0	0.0	5.0	708.0	1.0	165.0
					Mean =	2.8	233.5	0.3	17.8	0.0	0.0	3.0	363.8	0.3	41.3
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	1.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	3.0	249.0	1.0	64.0
					304	3.0	251.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.0	89.5	0.0	0.0	0.0	0.0	0.8	62.3	0.3	16.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	1.0	139.0	1.0	174.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	1.0	122.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	65.3	0.3	43.5
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE2 WT/grams 8/31/2011 HARVEST3
						103	104	105	106	107	108	109	110	111	112
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	1.0	92.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	69.0
					211	0.0	0.0	0.0	0.0	0.0	0.0	4.0	564.0	0.0	0.0
					315	2.0	261.0	0.0	0.0	0.0	0.0	1.0	87.0	0.0	0.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	5.0	534.0	0.0	0.0
					Mean =	0.8	88.3	0.0	0.0	0.0	0.0	2.5	296.3	0.3	17.3
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	1.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	1.0	76.0	1.0	43.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	59.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	20.0	0.0	0.0	0.0	0.0	0.3	19.0	0.5	25.5
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	1.0	136.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	3.0	371.0	0.0	0.0
					Mean =	0.3	34.0	0.0	0.0	0.0	0.0	0.8	92.8	0.0	0.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	1.0	159.0	0.0	0.0	0.0	0.0	3.0	313.0	0.0	0.0
					Mean =	0.3	39.8	0.0	0.0	0.0	0.0	0.8	78.3	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	1.0	173.0	0.0	0.0	0.0	0.0	0.0	0.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	43.3	0.0	0.0	0.0	0.0	0.0	0.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0	0.0	0.0	3.0	306.0	1.0	75.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	1.0	103.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	1.0	149.0	0.0	0.0
					413	1.0	142.0	0.0	0.0	0.0	0.0	2.0	291.0	0.0	0.0
					Mean =	0.3	35.5	0.3	25.8	0.0	0.0	1.5	186.5	0.3	18.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE2 WT/grams 8/31/2011 HARVEST3
						103	104	105	106	107	108	109	110	111	112
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	0.0	0.0	1.0	120.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	4.0	393.0	0.0	0.0	0.0	0.0	1.0	99.0	0.0	0.0
					306	1.0	125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.3	129.5	0.0	0.0	0.0	0.0	0.5	54.8	0.0	0.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	2.0	339.0	2.0	199.0	0.0	0.0	1.0	203.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	84.8	0.5	49.8	0.0	0.0	0.3	50.8	0.0	0.0
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	1.0	114.0	0.0	0.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	1.0	142.0	0.0	0.0	0.0	0.0	1.0	104.0	0.0	0.0
					405	1.0	172.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	78.5	0.0	0.0	0.0	0.0	0.5	54.5	0.0	0.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	2.0	249.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	62.3	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	1.0	116.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					210	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	1.0	119.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	29.0	0.0	0.0	0.0	0.0	0.3	29.8	0.0	0.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	1.0	156.0	0.0	0.0	3.0	669.0	0.0	0.0	1.0	100.0
					309	0.0	0.0	0.0	0.0	0.0	0.0	1.0	69.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	39.0	0.0	0.0	0.8	167.3	0.3	17.3	0.3	25.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE1 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/25/2011 HARVEST2	PEPPER PLANT5 - GRADE2 WT/grams 8/25/2011 HARVEST2	PEPPER PLANT1 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE2 WT/grams 8/31/2011 HARVEST3
						103	104	105	106	107	108	109	110	111	112
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	1.0	74.0	0.0	0.0	0.0	0.0	1.0	119.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	1.0	157.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					311	0.0	0.0	0.0	0.0	0.0	0.0	2.0	229.0	2.0	70.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	57.8	0.0	0.0	0.0	0.0	0.8	87.0	0.5	17.5
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	0.0	0.0	1.0	361.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	1.0	156.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	2.0	209.0	0.0	0.0	0.0	0.0	2.0	219.0	1.0	60.0
					Mean =	0.8	91.3	0.0	0.0	0.3	90.3	0.5	54.8	0.3	15.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	0.0	0.0	2.0	650.0	0.0	0.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	49.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.5	162.5	0.0	0.0	0.3	12.3

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -
Rating Data Type					US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.														
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	113	114	115	116	117	118	119	120	121	122
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	3.0	215.0	0.0	0.0	0.0	0.0	1.0	70.0
					220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					310	0.0	0.0	3.0	310.0	0.0	0.0	0.0	0.0	4.0	506.0
					406	0.0	0.0	2.0	236.0	0.0	0.0	0.0	0.0	4.0	397.0
					Mean =	0.0	0.0	2.0	190.3	0.0	0.0	0.0	0.0	2.3	243.3
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	1.0	134.0	0.0	0.0	0.0	0.0	2.0	264.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	33.5	0.0	0.0	0.0	0.0	0.5	66.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	2.0	185.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	46.3	0.0	0.0	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	2.0	574.0	0.0	0.0	1.0	207.0	1.0	361.0	1.0	133.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	143.5	0.0	0.0	0.3	51.8	0.3	90.3	0.3	33.3
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE1 WT/grams 8/31/2011 HARVEST3
						113	114	115	116	117	118	119	120	121	122
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	0.0	0.0	2.0	119.0	0.0	0.0	0.0	0.0
					211	1.0	198.0	2.0	321.0	0.0	0.0	0.0	0.0	3.0	404.0
					315	0.0	0.0	2.0	227.0	0.0	0.0	0.0	0.0	0.0	0.0
					417	0.0	0.0	3.0	306.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	49.5	1.8	213.5	0.5	29.8	0.0	0.0	0.8	101.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	317.0
					409	0.0	0.0	1.0	126.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	31.5	0.0	0.0	0.0	0.0	1.0	79.3
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	3.0	334.0	0.0	0.0	0.0	0.0	1.0	77.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	83.5	0.0	0.0	0.0	0.0	0.3	19.3
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	1.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	1.0	120.0	0.0	0.0	0.0	0.0	0.0	0.0
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	54.3	0.0	0.0	0.0	0.0	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	89.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	124.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	53.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0	1.0	51.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	1.0	118.0	0.0	0.0	0.0	0.0	2.0	139.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	119.0
					413	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	133.0
					Mean =	0.0	0.0	0.3	29.5	0.3	12.8	0.0	0.0	1.0	97.8

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE1 WT/grams 8/31/2011 HARVEST3
						113	114	115	116	117	118	119	120	121	122
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	3.0	387.0	0.0	0.0	0.0	0.0	1.0	147.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	96.8	0.0	0.0	0.0	0.0	0.3	36.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	783.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	195.8
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	1.0	126.0	0.0	0.0	0.0	0.0	2.0	210.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	250.0
					Mean =	0.0	0.0	0.3	31.5	0.0	0.0	0.0	0.0	1.0	115.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	1.0	96.0	0.0	0.0	0.0	0.0	1.0	256.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	24.0	0.0	0.0	0.0	0.0	0.3	64.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	2.0	92.0	0.0	0.0	3.0	328.0
					210	0.0	0.0	1.0	118.0	0.0	0.0	0.0	0.0	2.0	276.0
					302	0.0	0.0	0.0	0.0	1.0	56.0	0.0	0.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	29.5	0.8	37.0	0.0	0.0	1.3	151.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	1.0	109.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	4.0	664.0	0.0	0.0	3.0	700.0	0.0	0.0
					309	0.0	0.0	3.0	339.0	0.0	0.0	0.0	0.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	2.0	278.0	0.0	0.0	0.8	175.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE1 WT/grams 8/31/2011 HARVEST3
						113	114	115	116	117	118	119	120	121	122
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	358.0
					311	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	89.5
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	1.0	394.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	0.0	0.0	3.0	261.0	0.0	0.0	0.0	0.0	4.0	358.0
					Mean =	0.3	98.5	0.8	65.3	0.0	0.0	0.0	0.0	1.0	89.5
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	3.0	1090.0	0.0	0.0	0.0	0.0	2.0	610.0	2.0	307.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	132.0
					314	0.0	0.0	0.0	0.0	6.0	360.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.8	272.5	0.0	0.0	1.5	90.0	0.5	152.5	0.8	109.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY WT/grams 8/31/2011 HARVEST3
						123	124	125	126	127	128	129	130	131	132
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					310	0.0	0.0	0.0	0.0	3.0	288.0	0.0	0.0	0.0	0.0
					406	0.0	0.0	0.0	0.0	1.0	121.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.0	102.3	0.0	0.0	0.0	0.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	1.0	86.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.3	21.5	0.0	0.0	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	0.0	0.0	2.0	588.0	1.0	186.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	147.0	0.3	46.5	0.0	0.0	0.0	0.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -
Rating Data Type					GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.														
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	123	124	125	126	127	128	129	130	131	132
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	0.0	0.0	1.0	93.0	0.0	0.0	0.0	0.0
					211	0.0	0.0	0.0	0.0	3.0	319.0	0.0	0.0	0.0	0.0
					315	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.0	103.0	0.0	0.0	0.0	0.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	4.0	323.0	1.0	63.0	0.0	0.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.0	80.8	0.3	15.8	0.0	0.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	0.0	0.0	1.0	127.0	0.0	0.0	0.0	0.0
					402	0.0	0.0	0.0	0.0	1.0	108.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.5	58.8	0.0	0.0	0.0	0.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					413	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY WT/grams 8/31/2011 HARVEST3
						123	124	125	126	127	128	129	130	131	132
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	0.0	0.0	4.0	459.0	3.0	173.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	255.0
					Mean =	0.0	0.0	0.0	0.0	1.0	114.8	0.8	43.3	0.3	63.8
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	2.0	207.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	1.0	194.0	0.0	0.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.8	100.3	0.0	0.0	0.0	0.0
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	0.0	0.0	3.0	288.0	0.0	0.0	0.0	0.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.8	72.0	0.0	0.0	0.0	0.0
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					210	0.0	0.0	4.0	1078.0	0.0	0.0	0.0	0.0	2.0	577.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	1.0	56.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	1.0	269.5	0.0	0.0	0.3	14.0	0.5	144.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	3.0	335.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	631.0
					309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.8	83.8	0.0	0.0	0.5	157.8

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT4 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - US FANCY WT/grams 8/31/2011 HARVEST3
						123	124	125	126	127	128	129	130	131	132
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	1.0	99.0	0.0	0.0	0.0	0.0
					311	0.0	0.0	0.0	0.0	1.0	76.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.5	43.8	0.0	0.0	0.0	0.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	2.0	687.0	0.0	0.0	1.0	145.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					414	3.0	265.0	0.0	0.0	2.0	207.0	2.0	138.0	0.0	0.0
					Mean =	0.8	66.3	0.5	171.8	0.5	51.8	0.8	70.8	0.0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	3.0	971.0	0.0	0.0	0.0	0.0	1.0	310.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	1.0	148.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	242.8	0.3	37.0	0.0	0.0	0.3	77.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE2 WT/grams 9/9/2011 HARVEST4
						133	134	135	136	137	138	139	140	141	142
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0	0.0	0.0	1.0	172.0	2.0	159.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.3	43.0	0.5	39.8
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	2.0	199.0	0.0	0.0	0.0	0.0	3.0	353.0	0.0	0.0
					220	0.0	0.0	0.0	0.0	0.0	0.0	4.0	625.0	2.0	194.0
					310	1.0	108.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	308.0
					406	0.0	0.0	0.0	0.0	0.0	0.0	3.0	407.0	2.0	148.0
					Mean =	0.8	76.8	0.0	0.0	0.0	0.0	2.5	346.3	1.8	162.5
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	0.0	0.0	3.0	287.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	2.0	189.0	3.0	235.0
					304	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	2.0	372.0	4.0	322.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	1.8	212.0	1.8	139.3
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	44.0
					218	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	109.0
					319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	0.0	0.0	2.0	267.0	2.0	108.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	66.8	1.3	65.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0	0.0	0.0	2.0	227.0	3.0	141.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	4.0	527.0	3.0	202.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	1.5	188.5	1.5	85.8
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	152.0
					320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	0.0	0.0	0.0	0.0	2.0	226.0	3.0	151.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	56.5	1.3	75.8

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE2 WT/grams 9/9/2011 HARVEST4
						133	134	135	136	137	138	139	140	141	142
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	1.0	110.0	5.0	409.0	0.0	0.0	1.0	124.0	5.0	333.0
					211	1.0	108.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	234.0
					315	1.0	118.0	0.0	0.0	0.0	0.0	2.0	300.0	2.0	131.0
					417	0.0	0.0	0.0	0.0	0.0	0.0	3.0	390.0	1.0	79.0
					Mean =	0.8	84.0	1.3	102.3	0.0	0.0	1.5	203.5	3.0	194.3
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	125.0
					204	2.0	190.0	2.0	111.0	0.0	0.0	0.0	0.0	2.0	158.0
					312	1.0	96.0	2.0	109.0	0.0	0.0	0.0	0.0	5.0	343.0
					409	0.0	0.0	0.0	0.0	0.0	0.0	6.0	738.0	3.0	253.0
					Mean =	0.8	71.5	1.0	55.0	0.0	0.0	1.5	184.5	3.0	219.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	4.0	398.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	109.0
					221	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	223.0
					408	0.0	0.0	0.0	0.0	0.0	0.0	3.0	545.0	3.0	166.0
					Mean =	1.0	99.5	0.0	0.0	0.0	0.0	0.8	136.3	2.3	124.5
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	0.0	0.0	1.0	83.0	13.0	632.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	3.0	299.0	4.0	264.0
					301	0.0	0.0	0.0	0.0	0.0	0.0	3.0	367.0	4.0	281.0
					402	2.0	203.0	0.0	0.0	0.0	0.0	1.0	158.0	4.0	438.0
					Mean =	0.5	50.8	0.0	0.0	0.0	0.0	2.0	226.8	6.3	403.8
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	0.0	0.0	2.0	261.0	6.0	328.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.5	65.3	1.5	82.0
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	1.0	60.0	0.0	0.0	0.0	0.0	6.0	460.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	3.0	373.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					307	5.0	668.0	0.0	0.0	0.0	0.0	4.0	529.0	4.0	359.0
					413	2.0	248.0	0.0	0.0	0.0	0.0	6.0	809.0	3.0	159.0
					Mean =	2.5	322.3	0.3	15.0	0.0	0.0	2.5	334.5	3.3	244.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE2 WT/grams 9/9/2011 HARVEST4
						133	134	135	136	137	138	139	140	141	142
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	69.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	2.0	216.0	0.0	0.0	0.0	0.0	3.0	336.0	1.0	58.0
					306	1.0	201.0	2.0	169.0	0.0	0.0	0.0	0.0	2.0	114.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	3.0	297.0	2.0	120.0
					Mean =	0.8	104.3	0.5	42.3	0.0	0.0	1.5	158.3	1.5	90.3
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	0.0	0.0	0.0	0.0	1.0	306.0	1.0	212.0	2.0	148.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	2.0	206.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	2.0	302.0	5.0	387.0
					411	0.0	0.0	1.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	17.3	0.3	76.5	1.3	180.0	1.8	133.8
15	UNTREATED CONTROL				115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	1.0	126.0	0.0	0.0
					317	1.0	124.0	2.0	229.0	0.0	0.0	2.0	322.0	2.0	167.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	31.0	0.5	57.3	0.0	0.0	0.8	112.0	0.5	41.8
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	319.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	79.8
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	110.0
					210	1.0	175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	1.0	134.0	0.0	0.0	0.0	0.0	2.0	203.0	7.0	401.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	77.3	0.0	0.0	0.0	0.0	0.5	50.8	2.3	127.8
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	0.0	0.0	1.0	162.0	0.0	0.0
					214	0.0	0.0	0.0	0.0	0.0	0.0	3.0	430.0	5.0	382.0
					309	0.0	0.0	0.0	0.0	0.0	0.0	5.0	580.0	0.0	0.0
					421	1.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.3	12.8	0.0	0.0	0.0	0.0	2.3	293.0	1.3	95.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT5 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT1 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT1 - GRADE2 WT/grams 9/9/2011 HARVEST4
						133	134	135	136	137	138	139	140	141	142
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	0.0	0.0	5.0	849.0	2.0	170.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	1.0	150.0	0.0	0.0	0.0	0.0	1.0	143.0	5.0	345.0
					311	0.0	0.0	1.0	48.0	0.0	0.0	0.0	0.0	3.0	256.0
					420	0.0	0.0	0.0	0.0	0.0	0.0	2.0	253.0	3.0	150.0
					Mean =	0.3	37.5	0.3	12.0	0.0	0.0	2.0	311.3	3.3	230.3
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	1.0	269.0	1.0	268.0	0.0	0.0	1.0	136.0	2.0	81.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	0.0	0.0	0.0	0.0	1.0	107.0	5.0	314.0
					313	0.0	0.0	0.0	0.0	0.0	0.0	3.0	235.0	4.0	207.0
					414	2.0	153.0	2.0	158.0	0.0	0.0	1.0	143.0	4.0	305.0
					Mean =	0.8	105.5	0.8	106.5	0.0	0.0	1.5	155.3	3.8	226.8
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	3.0	530.0	0.0	0.0	0.0	0.0	1.0	118.0	1.0	95.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.8	132.5	0.0	0.0	0.0	0.0	0.3	29.5	0.3	23.8

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE1 WT/grams 9/9/2011 HARVEST4
						143	144	145	146	147	148	149	150	151	152
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	0.0	0.0	1.0	153.0	1.0	107.0	0.0	0.0	3.0	466.0
					Mean =	0.0	0.0	0.3	38.3	0.3	26.8	0.0	0.0	0.8	116.5
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	0.0	0.0	1.0	43.0	0.0	0.0	2.0	185.0
					220	0.0	0.0	5.0	773.0	0.0	0.0	0.0	0.0	6.0	794.0
					310	0.0	0.0	4.0	571.0	2.0	171.0	0.0	0.0	1.0	115.0
					406	0.0	0.0	2.0	291.0	3.0	299.0	0.0	0.0	6.0	896.0
					Mean =	0.0	0.0	2.8	408.8	1.5	128.3	0.0	0.0	3.8	497.5
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	2.0	257.0	2.0	185.0	0.0	0.0	2.0	231.0
					217	0.0	0.0	0.0	0.0	4.0	282.0	0.0	0.0	0.0	0.0
					304	0.0	0.0	1.0	161.0	1.0	77.0	0.0	0.0	5.0	635.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	104.5	1.8	136.0	0.0	0.0	1.8	216.5
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	206.0
					218	0.0	0.0	1.0	190.0	0.0	0.0	0.0	0.0	0.0	0.0
					319	0.0	0.0	3.0	407.0	4.0	349.0	0.0	0.0	0.0	0.0
					416	0.0	0.0	0.0	0.0	1.0	79.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	1.0	149.3	1.3	107.0	0.0	0.0	0.5	51.5
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	2.0	244.0	1.0	45.0	0.0	0.0	0.0	0.0
					207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	1.0	229.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	118.3	0.3	11.3	0.0	0.0	0.0	0.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	1.0	31.0	0.0	0.0	6.0	569.0
					320	0.0	0.0	0.0	0.0	3.0	190.0	0.0	0.0	0.0	0.0
					410	0.0	0.0	1.0	236.0	0.0	0.0	0.0	0.0	1.0	111.0
					Mean =	0.0	0.0	0.3	59.0	1.0	55.3	0.0	0.0	1.8	170.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE1 WT/grams 9/9/2011 HARVEST4
						143	144	145	146	147	148	149	150	151	152
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	0.0	0.0	2.0	204.0	3.0	162.0	0.0	0.0	2.0	275.0
					211	0.0	0.0	1.0	150.0	1.0	65.0	0.0	0.0	0.0	0.0
					315	0.0	0.0	2.0	204.0	6.0	380.0	0.0	0.0	2.0	216.0
					417	0.0	0.0	1.0	193.0	0.0	0.0	0.0	0.0	5.0	669.0
					Mean =	0.0	0.0	1.5	187.8	2.5	151.8	0.0	0.0	2.3	290.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	119.0
					312	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	272.0
					409	0.0	0.0	4.0	347.0	2.0	214.0	0.0	0.0	3.0	428.0
					Mean =	0.0	0.0	1.0	86.8	0.5	53.5	0.0	0.0	1.5	204.8
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	0.0	0.0	0.0	0.0	1.0	166.0	0.0	0.0	2.0	325.0
					221	0.0	0.0	1.0	85.0	1.0	48.0	0.0	0.0	2.0	236.0
					303	0.0	0.0	0.0	0.0	2.0	173.0	0.0	0.0	2.0	214.0
					408	0.0	0.0	0.0	0.0	1.0	68.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	21.3	1.3	113.8	0.0	0.0	1.5	193.8
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	0.0	0.0	1.0	52.0	0.0	0.0	0.0	0.0
					213	0.0	0.0	0.0	0.0	6.0	459.0	0.0	0.0	0.0	0.0
					301	0.0	0.0	2.0	228.0	4.0	359.0	0.0	0.0	4.0	515.0
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	151.0
					Mean =	0.0	0.0	0.5	57.0	2.8	217.5	0.0	0.0	1.3	166.5
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	3.0	158.0	0.0	0.0	0.0	0.0
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	226.0
					418	0.0	0.0	4.0	520.0	2.0	107.0	0.0	0.0	1.0	148.0
					Mean =	0.0	0.0	1.0	130.0	1.3	66.3	0.0	0.0	0.8	93.5
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0	3.0	178.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	0.0	0.0	2.0	196.0	5.0	290.0	0.0	0.0	3.0	349.0
					307	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	274.0
					413	0.0	0.0	1.0	103.0	3.0	146.0	0.0	0.0	3.0	486.0
					Mean =	0.0	0.0	0.8	74.8	2.8	153.5	0.0	0.0	2.0	277.3

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT2 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE1 WT/grams 9/9/2011 HARVEST4
						143	144	145	146	147	148	149	150	151	152
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	2.0	167.0	4.0	212.0	0.0	0.0	1.0	93.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0.0	0.0	2.0	95.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	41.8	1.5	76.8	0.0	0.0	0.3	23.3
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	2.0	624.0	1.0	178.0	0.0	0.0	3.0	915.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	2.0	279.0	2.0	130.0	0.0	0.0	1.0	114.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	156.0	0.8	114.3	0.5	32.5	0.8	228.8	0.3	28.5
15	UNTREATED CONTROL				115	0.0	0.0	3.0	379.0	7.0	421.0	0.0	0.0	3.0	385.0
					203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	2.0	309.0	2.0	151.0	0.0	0.0	2.0	247.0
					405	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	759.0
					Mean =	0.0	0.0	1.3	172.0	2.3	143.0	0.0	0.0	2.8	347.8
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0	4.0	310.0	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	1.0	77.5	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	0.0	0.0	4.0	237.0	0.0	0.0	0.0	0.0
					210	0.0	0.0	1.0	87.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	21.8	1.0	59.3	0.0	0.0	0.0	0.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	2.0	216.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	1.0	132.0	1.0	55.0	0.0	0.0	0.0	0.0
					309	0.0	0.0	0.0	0.0	1.0	106.0	0.0	0.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.8	87.0	0.5	40.3	0.0	0.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT2 - US FANCY FRUIT NO 9/9/2011 HARVEST4 143	PEPPER PLANT2 - US FANCY WT/grams 9/9/2011 HARVEST4 144	PEPPER PLANT2 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4 145	PEPPER PLANT2 - GRADE1 WT/grams 9/9/2011 HARVEST4 146	PEPPER PLANT2 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4 147	PEPPER PLANT2 - GRADE2 WT/grams 9/9/2011 HARVEST4 148	PEPPER PLANT3 - US FANCY FRUIT NO 9/9/2011 HARVEST4 149	PEPPER PLANT3 - US FANCY WT/grams 9/9/2011 HARVEST4 150	PEPPER PLANT3 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4 151	PEPPER PLANT3 - GRADE1 WT/grams 9/9/2011 HARVEST4 152
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	0.0	0.0	0.0	0.0	4.0	253.0	0.0	0.0	1.0	169.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	5.0	321.0	0.0	0.0	0.0	0.0
					311	0.0	0.0	0.0	0.0	4.0	214.0	0.0	0.0	0.0	0.0
					420	0.0	0.0	1.0	129.0	4.0	245.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	32.3	4.3	258.3	0.0	0.0	0.3	42.3
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	94.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	0.0	0.0	2.0	298.0	6.0	438.0	0.0	0.0	2.0	217.0
					313	0.0	0.0	0.0	0.0	2.0	76.0	0.0	0.0	0.0	0.0
					414	0.0	0.0	1.0	111.0	2.0	110.0	0.0	0.0	2.0	231.0
					Mean =	0.0	0.0	0.8	102.3	2.5	156.0	0.0	0.0	1.3	135.5
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	0.0	0.0	2.0	171.0	0.0	0.0	3.0	462.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					314	0.0	0.0	1.0	133.0	2.0	122.0	0.0	0.0	0.0	0.0
					419	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.3	33.3	1.0	73.3	0.0	0.0	0.8	115.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -
Rating Data Type					GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
Trt-Eval Interval					HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
# Subsamples, Dec.														
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	153	154	155	156	157	158	159	160	161	162
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	2.0	208.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					404	2.0	225.0	0.0	0.0	0.0	0.0	1.0	64.0	0.0	0.0
					Mean =	1.0	108.3	0.0	0.0	0.0	0.0	0.3	16.0	0.0	0.0
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	5.0	255.0	0.0	0.0	3.0	443.0	0.0	0.0	0.0	0.0
					220	0.0	0.0	0.0	0.0	6.0	849.0	1.0	98.0	0.0	0.0
					310	2.0	180.0	0.0	0.0	1.0	117.0	4.0	195.0	0.0	0.0
					406	4.0	354.0	0.0	0.0	3.0	540.0	0.0	0.0	1.0	320.0
					Mean =	2.8	197.3	0.0	0.0	3.3	487.3	1.3	73.3	0.3	80.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	0.0	0.0	0.0	0.0	0.0	0.0	2.0	111.0	0.0	0.0
					217	0.0	0.0	0.0	0.0	0.0	0.0	1.0	54.0	0.0	0.0
					304	3.0	186.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					401	0.0	0.0	0.0	0.0	0.0	0.0	1.0	79.0	0.0	0.0
					Mean =	0.8	46.5	0.0	0.0	0.0	0.0	1.0	61.0	0.0	0.0
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	5.0	257.0	0.0	0.0	2.0	370.0	0.0	0.0	0.0	0.0
					218	0.0	0.0	0.0	0.0	3.0	337.0	4.0	190.0	0.0	0.0
					319	0.0	0.0	0.0	0.0	1.0	161.0	2.0	132.0	0.0	0.0
					416	3.0	284.0	0.0	0.0	2.0	262.0	4.0	288.0	0.0	0.0
					Mean =	2.0	135.3	0.0	0.0	2.0	282.5	2.5	152.5	0.0	0.0
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	4.0	282.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					207	0.0	0.0	1.0	229.0	5.0	566.0	1.0	96.0	0.0	0.0
					316	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.0	70.5	0.3	57.3	1.3	141.5	0.3	24.0	0.0	0.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					320	0.0	0.0	0.0	0.0	1.0	133.0	4.0	265.0	0.0	0.0
					410	2.0	79.0	0.0	0.0	0.0	0.0	2.0	162.0	0.0	0.0
					Mean =	0.5	19.8	0.0	0.0	0.3	33.3	1.5	106.8	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY WT/grams 9/9/2011 HARVEST4
						153	154	155	156	157	158	159	160	161	162
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	6.0	389.0	0.0	0.0	0.0	0.0	5.0	317.0	0.0	0.0
					211	3.0	309.0	0.0	0.0	1.0	151.0	0.0	0.0	0.0	0.0
					315	4.0	340.0	0.0	0.0	3.0	360.0	1.0	99.0	0.0	0.0
					417	3.0	170.0	0.0	0.0	4.0	582.0	0.0	0.0	0.0	0.0
					Mean =	4.0	302.0	0.0	0.0	2.0	273.3	1.5	104.0	0.0	0.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	7.0	392.0	0.0	0.0	0.0	0.0	6.0	276.0	0.0	0.0
					204	3.0	121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					312	3.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					409	6.0	396.0	0.0	0.0	4.0	554.0	3.0	189.0	0.0	0.0
					Mean =	4.8	289.8	0.0	0.0	1.0	138.5	2.3	116.3	0.0	0.0
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	5.0	394.0	0.0	0.0	3.0	434.0	3.0	139.0	0.0	0.0
					221	5.0	255.0	0.0	0.0	4.0	428.0	3.0	202.0	0.0	0.0
					303	4.0	258.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					408	1.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	3.8	237.8	0.0	0.0	1.8	215.5	1.5	85.3	0.0	0.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	2.0	84.0	0.0	0.0	0.0	0.0	8.0	446.0	1.0	220.0
					213	0.0	0.0	0.0	0.0	0.0	0.0	2.0	152.0	0.0	0.0
					301	4.0	258.0	0.0	0.0	1.0	122.0	4.0	289.0	0.0	0.0
					402	2.0	86.0	0.0	0.0	0.0	0.0	5.0	457.0	0.0	0.0
					Mean =	2.0	107.0	0.0	0.0	0.3	30.5	4.8	336.0	0.3	55.0
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0	1.0	230.0	0.0	0.0	3.0	1114.0
					205	1.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					308	2.0	136.0	0.0	0.0	0.0	0.0	1.0	67.0	0.0	0.0
					418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.8	49.0	0.0	0.0	0.3	57.5	0.3	16.8	0.8	278.5
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	3.0	169.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	3.0	180.0	0.0	0.0	0.0	0.0	2.0	83.0	0.0	0.0
					307	4.0	260.0	0.0	0.0	2.0	279.0	2.0	151.0	0.0	0.0
					413	8.0	694.0	0.0	0.0	0.0	0.0	4.0	301.0	0.0	0.0
					Mean =	4.5	325.8	0.0	0.0	0.5	69.8	2.0	133.8	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY WT/grams 9/9/2011 HARVEST4
						153	154	155	156	157	158	159	160	161	162
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	3.0	225.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	0.0	0.0	4.0	437.0	0.0	0.0	0.0	0.0
					306	0.0	0.0	0.0	0.0	0.0	0.0	5.0	352.0	0.0	0.0
					407	0.0	0.0	0.0	0.0	3.0	344.0	2.0	131.0	0.0	0.0
					Mean =	0.8	56.3	0.0	0.0	1.8	195.3	1.8	120.8	0.0	0.0
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	1.0	129.0	0.0	0.0	2.0	510.0	1.0	145.0	1.0	399.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	0.0	0.0	0.0	0.0	3.0	285.0	0.0	0.0	0.0	0.0
					305	1.0	63.0	0.0	0.0	1.0	156.0	0.0	0.0	0.0	0.0
					411	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.5	48.0	0.0	0.0	1.5	237.8	0.3	36.3	0.3	99.8
15	UNTREATED CONTROL				115	4.0	263.0	0.0	0.0	0.0	0.0	7.0	365.0	0.0	0.0
					203	3.0	104.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					317	0.0	0.0	0.0	0.0	2.0	275.0	2.0	164.0	0.0	0.0
					405	2.0	168.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	2.3	133.8	0.0	0.0	0.5	68.8	2.3	132.3	0.0	0.0
16	Clarity (1x)	0.5	lb ae/a	B	116	4.0	334.0	0.0	0.0	0.0	0.0	5.0	493.0	0.0	0.0
					215	1.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.3	97.8	0.0	0.0	0.0	0.0	1.3	123.3	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	1.0	52.0	0.0	0.0	0.0	0.0	1.0	52.0	0.0	0.0
					210	5.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					302	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					412	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.5	83.0	0.0	0.0	0.0	0.0	0.3	13.0	0.0	0.0
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					214	0.0	0.0	0.0	0.0	0.0	0.0	1.0	88.0	0.0	0.0
					309	3.0	177.0	0.0	0.0	0.0	0.0	1.0	85.0	0.0	0.0
					421	0.0	0.0	0.0	0.0	1.0	117.0	3.0	179.0	0.0	0.0
					Mean =	0.8	44.3	0.0	0.0	0.3	29.3	1.3	88.0	0.0	0.0

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT3 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT3 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - US FANCY WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT4 - GRADE2 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - US FANCY WT/grams 9/9/2011 HARVEST4
						153	154	155	156	157	158	159	160	161	162
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	4.0	240.0	0.0	0.0	1.0	128.0	3.0	178.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	0.0	0.0	0.0	0.0	3.0	334.0	3.0	321.0	0.0	0.0
					311	8.0	602.0	0.0	0.0	2.0	214.0	2.0	97.0	0.0	0.0
					420	2.0	106.0	0.0	0.0	1.0	121.0	4.0	275.0	0.0	0.0
					Mean =	3.5	237.0	0.0	0.0	1.8	199.3	3.0	217.8	0.0	0.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	2.0	189.0	0.0	0.0	0.0	0.0	3.0	167.0	0.0	0.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	3.0	245.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					313	0.0	0.0	0.0	0.0	1.0	143.0	2.0	116.0	0.0	0.0
					414	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	1.3	108.5	0.0	0.0	0.3	35.8	1.3	70.8	0.0	0.0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	3.0	208.0	0.0	0.0	3.0	409.0	4.0	329.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	1.0	35.0	0.0	0.0	2.0	363.0	4.0	278.0	0.0	0.0
					314	0.0	0.0	0.0	0.0	0.0	0.0	1.0	55.0	0.0	0.0
					419	2.0	214.0	0.0	0.0	1.0	162.0	2.0	113.0	0.0	0.0
					Mean =	1.5	114.3	0.0	0.0	1.5	233.5	2.8	193.8	0.0	0.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE2 WT/grams 9/9/2011 HARVEST4
						163	164	165	166
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	101	0.0	0.0	2.0	149.0
					219	0.0	0.0	0.0	0.0
					321	0.0	0.0	0.0	0.0
					404	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.5	37.3
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	102	0.0	0.0	2.0	180.0
					220	3.0	400.0	2.0	183.0
					310	2.0	213.0	4.0	263.0
					406	7.0	1170.0	3.0	182.0
					Mean =	3.0	445.8	2.8	202.0
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	103	2.0	299.0	3.0	195.0
					217	0.0	0.0	1.0	50.0
					304	5.0	772.0	0.0	0.0
					401	7.0	1173.0	3.0	236.0
					Mean =	3.5	561.0	1.8	120.3
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	104	0.0	0.0	0.0	0.0
					218	4.0	488.0	5.0	340.0
					319	0.0	0.0	0.0	0.0
					416	0.0	0.0	5.0	197.0
					Mean =	1.0	122.0	2.5	134.3
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	105	0.0	0.0	0.0	0.0
					207	1.0	135.0	0.0	0.0
					316	0.0	0.0	0.0	0.0
					403	0.0	0.0	2.0	156.0
					Mean =	0.3	33.8	0.5	39.0
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	106	0.0	0.0	0.0	0.0
					208	1.0	157.0	2.0	126.0
					320	1.0	115.0	0.0	0.0
					410	1.0	111.0	3.0	210.0
					Mean =	0.8	95.8	1.3	84.0

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE2 WT/grams 9/9/2011 HARVEST4
						163	164	165	166
7	CLARITY (1/50 X)	0.01	lb ae/a	B	107	1.0	151.0	5.0	273.0
					211	2.0	249.0	4.0	246.0
					315	0.0	0.0	5.0	273.0
					417	6.0	918.0	0.0	0.0
					Mean =	2.3	329.5	3.5	198.0
8	CLARITY (1/100 X)	0.005	lb ae/a	B	108	0.0	0.0	3.0	185.0
					204	1.0	91.0	3.0	214.0
					312	0.0	0.0	6.0	408.0
					409	0.0	0.0	5.0	346.0
					Mean =	0.3	22.8	4.3	288.3
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	109	3.0	372.0	1.0	68.0
					221	1.0	119.0	0.0	0.0
					303	0.0	0.0	2.0	88.0
					408	0.0	0.0	0.0	0.0
					Mean =	1.0	122.8	0.8	39.0
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	110	0.0	0.0	4.0	171.0
					213	0.0	0.0	4.0	216.0
					301	0.0	0.0	0.0	0.0
					402	1.0	213.0	3.0	218.0
					Mean =	0.3	53.3	2.8	151.3
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	111	0.0	0.0	0.0	0.0
					205	2.0	174.0	2.0	97.0
					308	0.0	0.0	0.0	0.0
					418	0.0	0.0	0.0	0.0
					Mean =	0.5	43.5	0.5	24.3
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	112	0.0	0.0	0.0	0.0
	DURANGO (1/100 X)	0.0075	lb ae/a	B	201	1.0	131.0	4.0	182.0
					307	0.0	0.0	4.0	237.0
					413	3.0	458.0	7.0	431.0
					Mean =	1.0	147.3	3.8	212.5

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE2 WT/grams 9/9/2011 HARVEST4
						163	164	165	166
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113	0.0	0.0	0.0	0.0
	DURANGO (1/200 X)	0.00374	lb ae/a	B	216	0.0	0.0	1.0	46.0
					306	0.0	0.0	3.0	223.0
					407	0.0	0.0	2.0	185.0
					Mean =	0.0	0.0	1.5	113.5
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	114	2.0	278.0	0.0	0.0
	DURANGO (1/400 X)	0.00187	lb ae/a	B	212	2.0	321.0	0.0	0.0
					305	0.0	0.0	3.0	206.0
					411	3.0	300.0	1.0	96.0
					Mean =	1.8	224.8	1.0	75.5
15	UNTREATED CONTROL				115	1.0	139.0	3.0	261.0
					203	0.0	0.0	3.0	213.0
					317	5.0	686.0	0.0	0.0
					405	0.0	0.0	0.0	0.0
					Mean =	1.5	206.3	1.5	118.5
16	Clarity (1x)	0.5	lb ae/a	B	116	0.0	0.0	0.0	0.0
					215	0.0	0.0	0.0	0.0
					318	0.0	0.0	0.0	0.0
					415	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0
17	Durango (1/100 x)	0.0075	lb ae/a	B	117	0.0	0.0	2.0	134.0
					210	2.0	232.0	3.0	240.0
					302	0.0	0.0	2.0	107.0
					412	0.0	0.0	0.0	0.0
					Mean =	0.5	58.0	1.8	120.3
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	118	0.0	0.0	1.0	46.0
					214	1.0	152.0	4.0	310.0
					309	0.0	0.0	2.0	189.0
					421	0.0	0.0	0.0	0.0
					Mean =	0.3	38.0	1.8	136.3

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	PEPPER PLANT5 - GRADE 1 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE1 WT/grams 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE 2 FRUIT NO 9/9/2011 HARVEST4	PEPPER PLANT5 - GRADE2 WT/grams 9/9/2011 HARVEST4
	Crop Code								
	Part Rated								
	Rating Data Type								
	Rating Unit								
	Rating Date								
	Trt-Eval Interval								
	# Subsamples, Dec.								
						163	164	165	166
19	Clarity (1/100 x)	0.005	lb ae/a	B	119	3.0	436.0	0.0	0.0
	Durango (1/100 x)	0.0075	lb ae/a	B	206	1.0	120.0	1.0	95.0
					311	0.0	0.0	2.0	77.0
					420	4.0	760.0	2.0	188.0
					Mean =	2.0	329.0	1.3	90.0
20	Clarity (1/200 x)	0.0025	lb ae/a	B	120	0.0	0.0	7.0	446.0
	Durango (1/200 x)	0.00374	lb ae/a	B	202	3.0	313.0	6.0	326.0
					313	0.0	0.0	0.0	0.0
					414	0.0	0.0	2.0	161.0
					Mean =	0.8	78.3	3.8	233.3
21	Clarity (1/400 x)	0.00125	lb ae/a	B	121	0.0	0.0	0.0	0.0
	Durango (1/400 x)	0.00187	lb ae/a	B	209	0.0	0.0	0.0	0.0
					314	1.0	179.0	1.0	54.0
					419	0.0	0.0	0.0	0.0
					Mean =	0.3	44.8	0.3	13.5

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	PEPPERHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	STUNT	CUPPING	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	HEIGHT
	Rating Unit				%	%	%	%	%	%	%	%	%	%	CM
	Rating Date				7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	3DAT	7DAT	7DAT	7 DAT	7 DAT	7 DAT	7DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0 a	0 a	94 a	64 a	0 b	0 a	10 a	33 a	40 a	20 a-d	14 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0 a	0 a	10 c	8 c	14 a	0 a	0 c	11 b	15 bc	16 bcd	17 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0 a	0 a	5 c	11 c	10 ab	0 a	0 c	8 b	14 bc	14 bcd	17 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0 a	0 a	9 c	9 c	11 ab	0 a	0 c	6 b	13 bc	20 a-d	16 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0 a	0 a	6 c	8 c	9 ab	0 a	0 c	6 b	9 bc	14 bcd	17 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0 a	0 a	6 c	8 c	6 ab	0 a	0 c	3 b	8 bc	6 cd	15 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0 a	0 a	6 c	16 c	15 a	0 a	0 c	9 b	14 bc	30 ab	15 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0 a	0 a	6 c	13 c	8 ab	0 a	0 c	8 b	13 bc	19 a-d	15 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	0 a	0 a	8 c	10 c	8 ab	0 a	0 c	5 b	11 bc	19 a-d	17 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0 a	0 a	9 c	13 c	9 ab	0 a	0 c	6 b	11 bc	23 abc	16 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0 a	0 a	16 c	9 c	10 ab	0 a	0 c	4 b	10 bc	11 bcd	16 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	0 a	0 a	6 c	3 c	8 ab	0 a	0 c	6 b	16 bc	19 a-d	17 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0 a	0 a	9 c	18 c	16 a	0 a	0 c	5 b	14 bc	23 abc	15 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	0 a	0 a	9 c	10 c	14 a	0 a	0 c	3 b	6 bc	9 bcd	15 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0 a	0 a	0 c	0 c	0 b	0 a	0 c	0 b	0 c	0 d	16 a
16	Clarity (1x)	0.5	lb ae/a	B	0 a	0 a	78 b	49 b	13 ab	1 a	6 b	43 a	46 a	39 a	14 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	0 a	0 a	13 c	9 c	10 ab	0 a	0 c	6 b	13 bc	13 bcd	15 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0 a	0 a	6 c	0 c	10 ab	0 a	0 c	5 b	6 bc	11 bcd	16 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	0 a	0 a	6 c	14 c	8 ab	0 a	0 c	10 b	19 b	30 ab	15 a
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	0 a	0 a	6 c	10 c	5 ab	0 a	0 c	6 b	11 bc	21 a-d	16 a
	Durango (1/200 x)	0.00374	lb ae/a	B											

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	STUNT	CUPPING	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	HEIGHT
	Rating Unit				%	%	%	%	%	%	%	%	%	%	CM
	Rating Date				7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	3DAT	7DAT	7DAT	7 DAT	7 DAT	7 DAT	7DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0 a	0 a	6 c	5 c	8 ab	0 a	0 c	8 b	8 bc	11 bcd	15 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
	LSD (P=.05)				0.0	0.0	10.9	14.3	7.2	0.8	2.6	11.3	9.3	12.0	2.8
	Standard Deviation				0.0	0.0	7.7	10.1	5.1	0.5	1.8	8.0	6.6	8.5	2.0
	CV				0.0	0.0	51.63	75.03	56.93	916.52	236.64	88.85	46.84	48.8	12.58
	Bartlett's X2				0.0	0.0	33.602	20.373	17.748	0.0	0.442	85.084	53.219	24.096	21.089
	P(Bartlett's X2)				.	.	0.02*	0.312	0.405	.	0.506	0.001*	0.001*	0.192	0.392
	Replicate F				0.000	0.000	5.808	3.806	7.135	1.000	1.746	1.137	1.558	1.023	3.199
	Replicate Prob(F)				1.0000	1.0000	0.0015	0.0145	0.0004	0.3992	0.1673	0.3414	0.2089	0.3889	0.0296
	Treatment F				0.000	0.000	38.213	8.970	2.689	1.000	7.544	6.190	10.248	4.214	0.802
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	0.0017	0.4756	0.0001	0.0001	0.0001	0.0001	0.7017

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21	22	23
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -	PLANT2 -	PLANT3 -
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	CM	CM	%	%	%	%	%	CM	CM	CM
	Rating Date				7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
	Trt-Eval Interval				7DAT	7DAT	7DAT	7DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT	14DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0		- 1	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	13 a	13 a	14 a	14 a	0 a	19 a	26 ab	38 a	26.3 ab	15.3 b	14.3 b	14.5 c
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	15 a	17 a	17 a	14 a	0 a	5 b	10 ab	14 b	17.5 a-d	19.3 ab	18.5 a	19.4 abc
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	16 a	16 a	16 a	16 a	1 a	3 b	13 ab	11 b	10.0 bcd	20.5 ab	20.5 a	19.0 abc
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	16 a	15 a	14 a	15 a	0 a	5 b	13 ab	15 b	16.3 a-d	19.8 ab	19.5 a	19.8 abc
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	16 a	15 a	17 a	15 a	0 a	4 b	13 ab	13 b	12.5 a-d	20.3 ab	19.5 a	20.0 abc
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	14 a	17 a	17 a	17 a	0 a	6 b	6 b	14 b	11.3 bcd	19.0 ab	19.0 a	20.0 abc
7	CLARITY (1/50 X)	0.01	lb ae/a	B	15 a	15 a	14 a	15 a	0 a	5 b	19 ab	16 b	12.5 a-d	17.3 ab	17.5 a	16.8 abc
8	CLARITY (1/100 X)	0.005	lb ae/a	B	16 a	16 a	15 a	14 a	0 a	4 b	18 ab	18 b	20.0 abc	18.8 ab	18.0 a	18.0 abc
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	16 a	15 a	15 a	15 a	0 a	3 b	14 ab	15 b	18.8 a-d	19.8 ab	19.0 a	18.5 abc
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	15 a	16 a	14 a	17 a	0 a	3 b	15 ab	15 b	16.3 a-d	19.3 ab	18.3 a	20.5 ab
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	16 a	16 a	15 a	15 a	0 a	3 b	9 ab	14 b	8.8 bcd	20.8 a	21.5 a	21.5 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	15 a	17 a	15 a	17 a	0 a	5 b	10 ab	14 b	13.8 a-d	20.3 ab	18.8 a	20.3 ab
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	15 a	15 a	14 a	15 a	0 a	6 b	11 ab	13 b	12.5 a-d	19.0 ab	19.5 a	20.3 ab
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	16 a	15 a	14 a	15 a	0 a	3 b	9 ab	6 b	5.0 cd	19.5 ab	19.8 a	19.5 abc
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL				16 a	15 a	16 a	16 a	0 a	0 b	3 b	0 b	0.0 d	19.0 ab	18.0 a	18.5 abc
16	Clarity (1x)	0.5	lb ae/a	B	12 a	15 a	13 a	14 a	3 a	9 b	33 a	40 a	30.0 a	15.5 ab	13.5 b	15.5 bc
17	Durango (1/100 x)	0.0075	lb ae/a	B	15 a	15 a	16 a	16 a	0 a	3 b	9 ab	9 b	6.3 cd	19.0 ab	19.0 a	19.5 abc
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	16 a	14 a	14 a	16 a	0 a	1 b	8 b	5 b	7.5 bcd	20.0 ab	18.8 a	20.0 abc
19	Clarity (1/100 x)	0.005	lb ae/a	B	16 a	17 a	13 a	16 a	0 a	6 b	11 ab	16 b	18.8 a-d	18.8 ab	18.8 a	19.5 abc
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B	15 a	16 a	15 a	16 a	0 a	8 b	13 ab	15 b	12.5 a-d	19.0 ab	19.0 a	18.5 abc
	Durango (1/200 x)	0.00374	lb ae/a	B												

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Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21	22	23
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -	PLANT2 -	PLANT3 -
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	CM	CM	%	%	%	%	%	CM	CM	CM
	Rating Date				7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011
	Trt-Eval Interval				7DAT	7DAT	7DAT	7DAT	14 DAT	14 DAT	14 DAT	14 DAT	14DAT	14DAT	14DAT	14DAT
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0		- 1	- 1	- 1
21	Clarity (1/400 x)	0.00125	lb ae/a	B	16 a	15 a	15 a	16 a	0 a	6 b	13 ab	18 b	13.8 a-d	20.0 ab	20.8 a	18.8 abc
	Durango (1/400 x)	0.00187	lb ae/a	B												
	LSD (P=.05)				2.2	2.9	3.0	3.0	1.8	6.7	13.2	12.4	10.53	2.93	2.65	3.12
	Standard Deviation				1.6	2.1	2.1	2.1	1.2	4.7	9.3	8.8	7.45	2.07	1.87	2.20
	CV				10.36	13.43	14.11	13.76	693.47	96.04	72.11	58.12	53.92	10.89	10.06	11.62
	Bartlett's X2				15.899	8.445	17.884	28.337	1.328	15.863	28.646	31.692	22.754	31.419	29.513	17.216
	P(Bartlett's X2)				0.723	0.988	0.595	0.102	0.249	0.602	0.095	0.024*	0.20	0.05*	0.078	0.639
	Replicate F				3.845	1.413	0.304	0.219	0.712	1.671	2.405	1.176	1.899	2.015	0.758	0.680
	Replicate Prob(F)				0.0139	0.2479	0.8227	0.8829	0.5489	0.1831	0.0763	0.3266	0.1396	0.1216	0.5219	0.5676
	Treatment F				1.510	0.879	1.443	0.709	0.932	2.618	2.032	4.223	3.420	1.928	3.877	2.282
	Treatment Prob(F)				0.1117	0.6128	0.1382	0.8011	0.5520	0.0022	0.0185	0.0001	0.0001	0.0269	0.0001	0.0075

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	24	25	26	27	28	29	30	31	32	33	34	35
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER			PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
	Rating Data Type				HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	STUNT	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	%	%	%	%	%	%	CM	CM	CM	CM
	Rating Date				7/19/2011	7/19/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011
	Trt-Eval Interval				14DAT	14DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21DAT	28DAT	28DAT	28DAT	28DAT
	# Subsamples, Dec.				- 1	- 1	- 0	- 0	- 0	- 0		- 0	- 1	- 1	- 1	- 1
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	15.0 ab	15.0 b	0 a	6 a	16 ab	69 a	56.3 a	64 a	14.5 b	14.0 b	13.5 b	15.8 b
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	19.2 ab	17.9 ab	0 a	4 a	10 bc	18 b	22.5 b	14 bcd	36.8 a	36.3 a	37.8 a	37.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	19.3 ab	19.3 ab	0 a	3 a	8 cd	10 b	22.5 b	8 bcd	35.0 a	35.0 a	32.3 a	33.3 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	19.0 ab	17.8 ab	0 a	3 a	6 cd	13 b	15.0 b	10 bcd	33.3 a	33.3 a	30.5 a	33.8 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	20.3 a	17.3 ab	0 a	3 a	1 cd	8 b	18.8 b	6 bcd	33.5 a	33.0 a	32.0 a	34.5 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	18.3 ab	20.8 a	0 a	0 a	1 cd	5 b	10.0 b	0 d	31.5 a	33.0 a	32.8 a	33.3 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	17.0 ab	17.0 ab	0 a	8 a	8 cd	21 b	27.5 b	21 b	32.3 a	33.8 a	31.3 a	31.5 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	20.0 a	18.3 ab	0 a	4 a	8 cd	14 b	21.3 b	15 bcd	31.3 a	31.3 a	33.5 a	32.8 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	19.3 ab	19.3 ab	0 a	3 a	6 cd	13 b	18.8 b	13 bcd	34.3 a	30.5 a	32.5 a	30.3 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	17.8 ab	21.0 a	0 a	1 a	6 cd	10 b	13.8 b	6 bcd	36.3 a	32.0 a	34.0 a	32.8 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	19.8 a	20.5 a	0 a	1 a	1 cd	9 b	11.3 b	1 d	33.3 a	32.8 a	31.5 a	30.8 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	19.3 ab	21.3 a	0 a	5 a	5 cd	11 b	21.3 b	9 bcd	36.5 a	32.8 a	35.8 a	31.5 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	18.3 ab	17.8 ab	0 a	8 a	5 cd	15 b	16.3 b	11 bcd	32.0 a	33.8 a	34.0 a	31.8 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	18.5 ab	18.8 ab	0 a	1 a	3 cd	5 b	11.3 b	3 cd	34.3 a	34.8 a	31.5 a	32.8 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL				20.0 a	19.0 ab	0 a	1 a	1 cd	9 b	5.0 b	8 bcd	34.8 a	32.8 a	31.8 a	33.0 a
16	Clarity (1x)	0.5	lb ae/a	B	14.0 b	14.5 b	0 a	4 a	19 a	68 a	60.0 a	61 a	16.5 b	15.5 b	17.3 b	17.3 b
17	Durango (1/100 x)	0.0075	lb ae/a	B	20.5 a	19.8 ab	0 a	1 a	4 cd	9 b	18.8 b	8 bcd	33.5 a	34.0 a	35.0 a	31.8 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	20.0 a	19.3 ab	0 a	1 a	0 d	5 b	11.3 b	0 d	33.5 a	34.0 a	33.8 a	35.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	17.3 ab	18.5 ab	0 a	4 a	10 bc	16 b	20.0 b	19 bc	35.3 a	32.5 a	33.3 a	31.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B	19.5 ab	19.0 ab	0 a	3 a	4 cd	8 b	16.3 b	4 cd	34.8 a	34.3 a	31.5 a	33.8 a
	Durango (1/200 x)	0.00374	lb ae/a	B												

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	24	25	26	27	28	29	30	31	32	33	34	35
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER			PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT4 -	PLANT5 -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
	Rating Data Type				HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY	INJURY	LEAFCURL	STUNT	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	%	%	%	%	%	%	CM	CM	CM	CM
	Rating Date				7/19/2011	7/19/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	7/26/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011
	Trt-Eval Interval				14DAT	14DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21DAT	28DAT	28DAT	28DAT	28DAT
	# Subsamples, Dec.				- 1	- 1	- 0	- 0	- 0	- 0		- 0	- 1	- 1	- 1	- 1
21	Clarity (1/400 x)	0.00125	lb ae/a	B	18.5 ab	19.5 ab	0 a	1 a	1 cd	5 b	6.3 b	3 cd	32.5 a	31.5 a	32.5 a	33.0 a
	Durango (1/400 x)	0.00187	lb ae/a	B												
	LSD (P=.05)				3.17	3.01	0.0	4.4	5.3	9.7	15.67	9.2	5.15	4.16	4.90	5.27
	Standard Deviation				2.24	2.13	0.0	3.1	3.7	6.9	11.08	6.5	3.64	2.94	3.47	3.73
	CV				12.06	11.44	0.0	105.72	64.25	42.86	54.93	48.59	11.32	9.36	11.07	11.93
	Bartlett's X2				21.82	13.674	0.0	9.397	18.804	25.511	81.569	26.991	14.494	27.495	13.142	23.115
	P(Bartlett's X2)				0.35	0.847	.	0.95	0.279	0.061	0.001*	0.079	0.805	0.122	0.871	0.283
	Replicate F				1.093	0.776	0.000	0.200	0.763	1.079	0.674	0.513	1.804	0.383	1.080	0.259
	Replicate Prob(F)				0.3591	0.5119	1.0000	0.8957	0.5194	0.3649	0.5711	0.6749	0.1562	0.7655	0.3643	0.8547
	Treatment F				2.212	2.688	0.000	1.798	6.822	26.880	6.229	28.337	10.008	15.067	10.406	7.616
	Treatment Prob(F)				0.0097	0.0017	1.0000	0.0421	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code										
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
Rating Data Type					HEIGHT	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET
Rating Unit					CM	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT
Rating Date					8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
Trt-Eval Interval					28DAT	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	2WAFLGUC	2WAFLGUC	2WAFLGUC	2WAFLGUC
# Subsamples, Dec.					- 1	- 1	- 1	- 1	- 1	- 1				
					36	37	38	39	40	41	42	43	44	45
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	15.3 b	0.0 d	0.0 b	0.0 d	0.0 d	0.0 b	0.0 c	0.0 c	0.0 b	0.0 c
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	34.0 a	0.8 bcd	0.0 b	0.5 cd	0.5 cd	0.3 b	2.8 ab	5.0 a	4.3 ab	4.0 ab
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	34.3 a	2.3 a-d	2.0 ab	2.3 a-d	3.0 abc	1.0 ab	4.5 a	3.3 ab	3.3 ab	3.0 abc
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	32.0 a	2.8 a-d	2.5 a	2.5 a-d	1.5 a-d	2.3 ab	2.8 ab	3.0 ab	2.5 ab	2.0 abc
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	33.3 a	2.3 a-d	1.8 ab	2.8 a-d	1.5 a-d	2.8 ab	3.8 a	3.8 ab	3.5 ab	2.0 abc
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	35.8 a	3.0 abc	3.0 a	3.3 abc	3.8 ab	3.5 a	4.0 a	3.8 ab	3.5 ab	3.8 ab
7	CLARITY (1/50 X)	0.01	lb ae/a	B	32.5 a	0.0 d	0.0 b	0.0 d	0.0 d	0.0 b	3.0 a	3.5 ab	3.5 ab	2.0 abc
8	CLARITY (1/100 X)	0.005	lb ae/a	B	32.0 a	1.3 a-d	1.8 ab	1.0 a-d	1.3 a-d	1.0 ab	2.0 abc	2.5 b	1.0 ab	2.3 abc
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	28.3 a	1.3 a-d	1.3 ab	0.8 bcd	2.3 a-d	1.8 ab	2.3 abc	1.5 bc	2.3 ab	2.5 abc
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	35.0 a	0.8 bcd	1.5 ab	2.0 a-d	1.0 bcd	1.5 ab	2.0 abc	1.8 bc	3.5 ab	1.0 bc
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	34.5 a	3.8 a	2.5 a	2.5 a-d	3.0 abc	3.5 a	4.5 a	3.0 ab	2.8 ab	3.3 ab
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	35.5 a	1.5 a-d	1.8 ab	1.0 a-d	1.8 a-d	2.0 ab	3.3 a	2.3 b	1.5 ab	2.5 abc
	DURANGO (1/100 X)	0.0075	lb ae/a	B										
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	34.8 a	2.0 a-d	2.0 ab	3.3 abc	1.0 bcd	1.3 ab	2.5 ab	3.8 ab	3.5 ab	2.8 abc
	DURANGO (1/200 X)	0.00374	lb ae/a	B										
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	33.5 a	2.5 a-d	3.5 a	3.5 ab	2.3 a-d	3.5 a	3.3 a	3.5 ab	3.8 ab	5.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B										
15	UNTREATED CONTROL				35.0 a	2.0 a-d	1.5 ab	1.3 a-d	1.8 a-d	2.0 ab	4.3 a	3.8 ab	2.3 ab	2.3 abc
16	Clarity (1x)	0.5	lb ae/a	B	16.8 b	0.0 d	0.0 b	0.0 d	0.0 d	0.0 b	0.3 bc	0.0 c	0.3 b	0.0 c
17	Durango (1/100 x)	0.0075	lb ae/a	B	33.5 a	3.0 abc	3.3 a	2.5 a-d	4.0 a	3.0 ab	4.3 a	3.3 ab	4.8 a	4.0 ab
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	33.3 a	3.3 ab	2.5 a	3.8 a	3.8 ab	3.0 ab	3.8 a	2.8 ab	4.0 ab	5.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	32.3 a	0.3 cd	1.3 ab	0.8 bcd	0.8 cd	0.8 ab	2.0 abc	2.0 b	2.5 ab	1.0 bc
	Durango (1/100 x)	0.0075	lb ae/a	B										
20	Clarity (1/200 x)	0.0025	lb ae/a	B	33.0 a	1.8 a-d	2.0 ab	1.3 a-d	2.3 a-d	2.0 ab	3.0 a	3.0 ab	3.0 ab	3.0 abc
	Durango (1/200 x)	0.00374	lb ae/a	B										

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	36	37	38	39	40	41	42	43	44	45
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -	PLANT5 -	PLANT1 -	PLANT2 -	PLANT3 -	PLANT4 -
	Rating Data Type				HEIGHT	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET	FRUIT SET
	Rating Unit				CM	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT	NO/PLANT
	Rating Date				8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/2/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Trt-Eval Interval				28DAT	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	1WAFLGUC	2WAFLGUC	2WAFLGUC	2WAFLGUC	2WAFLGUC
	# Subsamples, Dec.				- 1	- 1	- 1	- 1	- 1	- 1				
21	Clarity (1/400 x)	0.00125	lb ae/a	B	30.3 a	3.0 abc	2.3 ab	2.3 a-d	2.3 a-d	2.5 ab	3.3 a	3.8 ab	3.5 ab	2.8 abc
	Durango (1/400 x)	0.00187	lb ae/a	B										
	LSD (P=.05)				5.31	1.55	1.34	1.57	1.59	1.68	1.61	1.37	2.39	1.77
	Standard Deviation				3.76	1.10	0.94	1.11	1.12	1.18	1.14	0.97	1.69	1.25
	CV				11.88	61.97	54.7	63.16	62.9	66.34	39.01	34.47	60.17	48.73
	Bartlett's X2				17.594	20.248	10.5	14.74	18.76	17.096	17.518	17.806	36.406	19.724
	P(Bartlett's X2)				0.614	0.262	0.839	0.614	0.281	0.448	0.555	0.469	0.009*	0.233
	Replicate F				0.172	0.483	2.150	0.590	0.742	0.780	0.401	3.284	0.644	0.910
	Replicate Prob(F)				0.9149	0.6955	0.1034	0.6242	0.5310	0.5096	0.7524	0.0268	0.5896	0.4417
	Treatment F				8.551	4.488	4.904	4.713	4.821	4.013	4.679	6.476	2.204	4.779
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0098	0.0001

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	46	47	48	49	50	51	52	53	54	55
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -
	Rating Data Type				FRUIT SET	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1
	Rating Unit				NO/PLANT	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
	Rating Date				8/8/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
	Trt-Eval Interval				2WAFLGUC	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
	# Subsamples, Dec.					- 0	- 1	- 0	- 1	- 0	- 1	- 0	- 1	- 0
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 c	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	5.0 a	1 a	162.8 a	0 a	16.8 a	0 a	55.8 a	0 a	0.0 a	1 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	3.0 ab	1 a	155.3 a	1 a	133.3 a	0 a	37.5 a	1 a	326.0 a	1 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	3.3 ab	2 a	389.3 a	1 a	152.0 a	1 a	70.3 a	1 a	229.5 a	1 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	2.8 ab	1 a	172.0 a	1 a	176.3 a	0 a	46.0 a	0 a	63.0 a	1 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	4.0 ab	1 a	132.5 a	2 a	239.3 a	0 a	0.0 a	1 a	280.5 a	1 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	1.3 bc	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	1.3 bc	1 a	279.3 a	1 a	68.0 a	0 a	0.0 a	1 a	240.0 a	1 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	2.8 ab	1 a	207.8 a	1 a	77.8 a	0 a	0.0 a	1 a	327.5 a	0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	1.5 bc	1 a	240.0 a	0 a	21.3 a	0 a	0.0 a	1 a	322.5 a	0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	3.8 ab	1 a	267.3 a	3 a	408.0 a	0 a	0.0 a	0 a	71.3 a	2 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	3.3 ab	1 a	142.8 a	1 a	128.5 a	0 a	25.3 a	1 a	165.5 a	0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B										
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	5.0 a	1 a	151.8 a	1 a	192.5 a	0 a	0.0 a	1 a	270.5 a	1 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B										
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	4.8 a	1 a	295.8 a	2 a	250.8 a	0 a	0.0 a	1 a	211.0 a	3 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B										
15	UNTREATED CONTROL				3.0 ab	1 a	128.5 a	1 a	212.0 a	0 a	0.0 a	1 a	188.5 a	1 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 c	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a	0.0 a	0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	3.8 ab	1 a	224.3 a	2 a	241.3 a	1 a	75.3 a	1 a	132.0 a	2 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	3.8 ab	1 a	257.0 a	2 a	309.8 a	0 a	0.0 a	1 a	194.0 a	1 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	1.8 bc	0 a	88.3 a	0 a	0.0 a	0 a	18.8 a	1 a	230.8 a	1 a
	Durango (1/100 x)	0.0075	lb ae/a	B										
20	Clarity (1/200 x)	0.0025	lb ae/a	B	3.5 ab	1 a	184.3 a	2 a	222.8 a	0 a	0.0 a	1 a	176.0 a	1 a
	Durango (1/200 x)	0.00374	lb ae/a	B										

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Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code										
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -
Rating Data Type					FRUIT SET	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1
Rating Unit					NO/PLANT	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					8/8/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
Trt-Eval Interval					2WAFLGUC	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
# Subsamples, Dec.						- 0	- 1	- 0	- 1	- 0	- 1	- 0	- 1	- 0
					46	47	48	49	50	51	52	53	54	55
21	Clarity (1/400 x)	0.00125	lb ae/a	B	3.5 ab	1 a	273.3 a	2 a	293.0 a	0 a	0.0 a	1 a	141.8 a	2 a
	Durango (1/400 x)	0.00187	lb ae/a	B										
LSD (P=.05)					1.67	1.1	304.12	1.4	222.39	0.6	76.89	0.8	233.81	1.4
Standard Deviation					1.18	0.8	215.04	1.0	157.25	0.4	54.37	0.6	165.33	1.0
CV					40.76	124.1	120.37	103.56	105.07	333.41	347.32	100.15	97.25	114.77
Bartlett's X2					20.853	14.906	17.485	15.346	19.696	4.244	6.107	10.86	29.021	12.071
P(Bartlett's X2)					0.287	0.532	0.422	0.499	0.234	0.644	0.411	0.697	0.024*	0.739
Replicate F					0.442	0.424	0.424	1.476	0.899	0.101	0.138	3.198	3.502	0.523
Replicate Prob(F)					0.7235	0.7365	0.7368	0.2300	0.4472	0.9593	0.9369	0.0297	0.0207	0.6684
Treatment F					6.071	0.965	0.905	2.238	2.326	1.050	0.884	1.563	1.818	1.825
Treatment Prob(F)					0.0001	0.5140	0.5823	0.0086	0.0062	0.4226	0.6064	0.0938	0.0391	0.0382

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Crop Code	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
					Part Rated	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -
					Rating Data Type	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
					Rating Unit	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
					Rating Date	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
					Trt-Eval Interval	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
					# Subsamples, Dec.	- 1	- 1									
						56	57	58	59	60	61	62	63	64	65	66
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 c	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B		40.8 a	0.0 a	0.0 a	0.3 a	82.0 a	0.3 c	43.5 ab	0.3 a	30.3 a	0.5 a	145.8 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B		81.0 a	0.0 a	0.0 a	0.8 a	189.8 a	1.5 abc	258.5 ab	0.3 a	23.0 a	1.0 a	287.5 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B		205.3 a	0.5 a	61.3 a	1.3 a	361.3 a	0.8 abc	105.5 ab	0.0 a	0.0 a	0.5 a	175.3 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B		200.5 a	0.0 a	0.0 a	0.8 a	186.3 a	1.8 abc	295.3 ab	0.0 a	0.0 a	0.5 a	162.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B		115.3 a	0.3 a	35.3 a	0.5 a	120.5 a	2.8 ab	405.8 ab	0.0 a	0.0 a	1.5 a	376.3 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B		0.0 a	0.5 a	32.3 a	0.0 a	0.0 a	0.0 c	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B		165.0 a	0.0 a	0.0 a	0.5 a	170.0 a	0.5 bc	90.8 ab	0.0 a	0.0 a	1.0 a	302.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B		49.8 a	0.0 a	0.0 a	0.8 a	212.5 a	0.3 c	47.3 ab	0.0 a	0.0 a	0.8 a	202.3 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B		50.3 a	0.0 a	0.0 a	0.8 a	213.0 a	0.3 c	37.5 ab	0.5 a	70.5 a	0.5 a	172.8 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B		193.0 a	0.3 a	34.3 a	1.0 a	281.5 a	0.8 abc	97.3 ab	0.0 a	0.0 a	1.3 a	328.5 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B		0.0 a	0.5 a	53.3 a	0.5 a	159.3 a	0.3 c	44.0 ab	0.3 a	58.8 a	1.0 a	298.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B		206.0 a	0.3 a	18.5 a	0.3 a	65.5 a	2.5 abc	421.8 ab	0.3 a	18.0 a	0.8 a	202.3 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B		332.0 a	0.0 a	0.0 a	0.8 a	220.0 a	3.0 a	453.0 a	0.0 a	0.0 a	0.5 a	149.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL					122.3 a	0.0 a	0.0 a	0.3 a	89.8 a	0.8 abc	113.8 ab	0.0 a	0.0 a	0.5 a	118.0 a
16	Clarity (1x)	0.5	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 c	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B		256.5 a	0.0 a	0.0 a	0.8 a	213.8 a	1.3 abc	141.8 ab	0.5 a	46.3 a	0.5 a	130.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B		125.5 a	0.0 a	0.0 a	0.5 a	122.0 a	1.8 abc	291.0 ab	0.3 a	33.0 a	0.3 a	65.8 a
19	Clarity (1/100 x)	0.005	lb ae/a	B		104.0 a	0.0 a	0.0 a	0.3 a	77.3 a	0.5 bc	75.5 ab	0.0 a	0.0 a	0.8 a	238.5 a
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B		167.8 a	0.3 a	25.8 a	0.5 a	157.0 a	1.5 abc	166.3 ab	0.0 a	0.0 a	0.8 a	241.5 a
	Durango (1/200 x)	0.00374	lb ae/a	B												

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	56	57	58	59	60	61	62	63	64	65	66
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -
	Rating Data Type				GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
	Rating Unit				WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
	Rating Date				8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011
	Trt-Eval Interval				HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1
	# Subsamples, Dec.				- 1	- 1									
21	Clarity (1/400 x)	0.00125	lb ae/a	B	227.3 a	0.3 a	38.8 a	0.3 a	71.0 a	1.5 abc	286.5 ab	0.8 a	98.5 a	1.0 a	293.8 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
	LSD (P=.05)				221.01	0.59	64.10	0.88	244.87	1.37	232.75	0.58	72.96	0.90	259.80
	Standard Deviation				156.28	0.41	45.33	0.63	173.15	0.97	164.58	0.41	51.59	0.63	183.71
	CV				124.22	316.91	318.1	125.1	121.52	93.61	102.41	286.11	286.41	98.53	99.19
	Bartlett's X2				15.114	4.622	4.869	7.508	5.209	14.683	16.14	4.331	6.702	9.142	15.932
	P(Bartlett's X2)				0.516	0.706	0.676	0.976	0.997	0.618	0.514	0.741	0.461	0.907	0.529
	Replicate F				0.349	0.806	0.751	0.446	0.335	2.073	1.132	0.950	1.327	0.356	0.528
	Replicate Prob(F)				0.7900	0.4952	0.5259	0.7208	0.8000	0.1133	0.3434	0.4222	0.2740	0.7849	0.6649
	Treatment F				1.479	0.816	0.806	1.150	1.181	3.651	3.166	1.133	1.226	1.593	1.426
	Treatment Prob(F)				0.1232	0.6856	0.6960	0.3279	0.3014	0.0001	0.0003	0.3430	0.2666	0.0847	0.1462

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Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval # Subsamples, Dec.										
					PEPPER PLANT4 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT4 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - US FANCY WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 1 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE1 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE 2 FRUIT NO 8/16/2011 HARVEST1	PEPPER PLANT5 - GRADE2 WT/grams 8/16/2011 HARVEST1	PEPPER PLANT1 - US FANCY FRUIT NO 8/25/2011 HARVEST2
					67	68	69	70	71	72	73	74	75	76	77
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 b	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.0 b	0.0 b	0.0 a	0.0 a	0.3 a	74.8 a	0.3 a	21.3 a	0.0 a	0.0 a	0.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.5 b	88.5 b	0.3 a	29.0 a	0.8 a	185.0 a	0.8 a	81.5 a	0.5 a	64.8 a	0.5 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 b	0.0 b	0.3 a	50.8 a	0.8 a	226.3 a	1.8 a	248.3 a	0.0 a	0.0 a	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.5 b	74.5 b	0.5 a	115.3 a	0.8 a	188.3 a	1.3 a	262.0 a	0.3 a	53.5 a	0.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	1.3 b	165.0 b	0.3 a	30.8 a	1.3 a	323.5 a	2.3 a	327.3 a	0.3 a	51.0 a	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0.0 b	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.5 b	34.5 b	0.3 a	40.0 a	0.5 a	164.5 a	0.5 a	119.3 a	0.0 a	0.0 a	0.3 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	1.5 ab	245.8 ab	0.0 a	0.0 a	1.0 a	308.5 a	0.5 a	80.0 a	0.3 a	17.3 a	0.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.5 b	91.5 b	0.0 a	0.0 a	0.5 a	173.3 a	0.5 a	106.5 a	0.3 a	41.3 a	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	2.0 ab	274.8 ab	0.0 a	0.0 a	1.3 a	346.0 a	2.0 a	346.3 a	0.5 a	55.8 a	0.3 a
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	0.0075 0.0075	lb ae/a lb ae/a	B B	0.8 b	82.3 b	0.3 a	51.5 a	1.0 a	287.3 a	0.5 a	70.5 a	0.0 a	0.0 a	0.3 a
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	0.00374 0.00374	lb ae/a lb ae/a	B B	0.3 b	44.0 b	0.0 a	0.0 a	0.8 a	236.8 a	1.3 a	153.8 a	0.0 a	0.0 a	0.0 a
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	0.00187 0.00187	lb ae/a lb ae/a	B B	2.3 ab	308.3 ab	0.0 a	0.0 a	1.3 a	301.3 a	2.5 a	347.0 a	0.0 a	0.0 a	0.3 a
15	UNTREATED CONTROL				0.8 b	109.0 b	0.5 a	88.5 a	1.0 a	284.5 a	1.0 a	202.0 a	0.0 a	0.0 a	0.0 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 b	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	3.5 a	538.3 a	0.0 a	0.0 a	1.3 a	332.0 a	1.0 a	142.0 a	0.3 a	25.8 a	0.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	2.5 ab	324.3 ab	0.0 a	0.0 a	0.5 a	146.5 a	1.8 a	278.5 a	0.5 a	70.3 a	0.0 a
19	Clarity (1/100 x) Durango (1/100 x)	0.005 0.0075	lb ae/a lb ae/a	B B	0.0 b	0.0 b	0.0 a	0.0 a	0.5 a	149.5 a	0.5 a	89.5 a	0.3 a	61.0 a	0.0 a
20	Clarity (1/200 x) Durango (1/200 x)	0.0025 0.00374	lb ae/a lb ae/a	B B	1.0 b	162.0 b	0.3 a	24.5 a	0.0 a	0.0 a	1.0 a	142.3 a	0.5 a	82.5 a	0.0 a

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT1 -
Rating Data Type					GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/16/2011	8/25/2011
Trt-Eval Interval					HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST1	HARVEST2
# Subsamples, Dec.															
21	Clarity (1/400 x)	0.00125	lb ae/a	B	1.5 ab	229.8 ab	0.3 a	19.5 a	1.0 a	277.8 a	1.5 a	233.3 a	0.0 a	0.0 a	0.0 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					1.38	214.93	0.54	97.49	1.09	313.75	1.52	247.94	0.63	97.78	0.47
Standard Deviation					0.98	151.98	0.38	68.94	0.77	221.85	1.07	175.32	0.44	69.14	0.33
CV					106.55	115.12	293.0	321.88	113.92	116.31	108.44	113.25	265.92	277.63	395.69
Bartlett's X2					11.067	9.96	3.329	14.72	11.262	10.742	11.545	13.02	6.117	8.302	3.045
P(Bartlett's X2)					0.681	0.765	0.912	0.065	0.793	0.825	0.827	0.735	0.728	0.504	0.693
Replicate F					0.878	0.377	0.943	1.465	1.614	1.241	0.978	0.491	4.606	3.189	0.693
Replicate Prob(F)					0.4578	0.7696	0.4254	0.2332	0.1957	0.3028	0.4091	0.6899	0.0058	0.0300	0.5597
Treatment F					4.018	3.546	0.784	0.887	1.303	1.140	1.948	1.713	0.806	0.747	0.766
Treatment Prob(F)					0.0001	0.0001	0.7209	0.6031	0.2131	0.3370	0.0246	0.0565	0.6965	0.7615	0.7408

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Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Crop Code	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
					Part Rated	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -
					Rating Data Type	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2
					Rating Unit	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
					Rating Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011
					Trt-Eval Interval	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2
					# Subsamples, Dec.											
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B		0.0 a	1.5 a	144.3 a	0.0 b	0.0 a	0.0 a	0.0 a	1.5 a	158.0 a	0.0 b	0.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B		158.3 a	1.0 a	163.8 a	0.3 b	24.0 a	0.3 a	83.3 a	0.5 a	68.8 a	0.3 b	59.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.3 a	33.0 a	0.3 b	18.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B		0.0 a	0.8 a	102.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.8 a	113.5 a	0.0 b	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B		0.0 a	1.5 a	152.8 a	1.0 a	93.0 a	0.0 a	0.0 a	1.0 a	94.3 a	0.8 a	72.8 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B		103.8 a	1.0 a	109.3 a	0.0 b	0.0 a	0.0 a	0.0 a	0.3 a	26.3 a	0.0 b	0.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B		0.0 a	0.8 a	76.5 a	0.3 b	35.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B		0.0 a	0.3 a	29.5 a	0.0 b	0.0 a	0.0 a	0.0 a	0.3 a	30.5 a	0.0 b	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B		63.0 a	1.0 a	170.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B		83.3 a	0.0 a	0.0 a	0.0 b	0.0 a	0.5 a	144.8 a	0.0 a	0.0 a	0.0 b	0.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B		0.0 a	0.5 a	45.8 a	0.0 b	0.0 a	0.0 a	0.0 a	0.3 a	37.3 a	0.0 b	0.0 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B		75.8 a	0.3 a	37.3 a	0.0 b	0.0 a	0.3 a	77.0 a	1.0 a	185.8 a	0.0 b	0.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL					0.0 a	1.3 a	133.8 a	0.5 ab	56.0 a	0.0 a	0.0 a	1.5 a	166.0 a	0.0 b	0.0 a
16	Clarity (1x)	0.5	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B		67.0 a	0.8 a	105.5 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B		0.0 a	0.3 a	27.5 a	0.0 b	0.0 a	0.0 a	0.0 a	1.3 a	147.5 a	0.0 b	0.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B		0.0 a	0.3 a	43.5 a	0.3 b	22.0 a	0.0 a	0.0 a	0.3 a	41.8 a	0.0 b	0.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B		0.0 a	0.8 a	91.5 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a
	Durango (1/200 x)	0.00374	lb ae/a	B												

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	78	79	80	81	82	83	84	85	86	87	88
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -
	Rating Data Type				US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2
	Rating Unit				WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
	Rating Date				8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011
	Trt-Eval Interval				HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2
	# Subsamples, Dec.														
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.3 b	17.5 a	0.0 a	0.0 a	0.5 a	74.5 a	0.0 b	0.0 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
	LSD (P=.05)				148.19	1.47	186.73	0.51	53.75	0.38	115.14	1.07	144.42	0.36	47.76
	Standard Deviation				104.79	1.04	132.04	0.36	38.01	0.27	81.41	0.76	102.12	0.26	33.77
	CV				399.37	186.23	193.53	302.13	322.49	568.99	560.56	171.56	182.2	429.88	473.58
	Bartlett's X2				3.902	14.305	14.92	3.158	5.398	2.051	1.504	13.149	16.328	1.801	3.479
	P(Bartlett's X2)				0.564	0.427	0.384	0.676	0.369	0.359	0.471	0.358	0.177	0.406	0.176
	Replicate F				0.741	2.029	1.751	0.613	0.439	0.432	0.404	0.577	0.462	1.636	1.270
	Replicate Prob(F)				0.5320	0.1195	0.1662	0.6089	0.7262	0.7305	0.7503	0.6325	0.7095	0.1904	0.2930
	Treatment F				0.774	0.965	0.857	1.859	1.586	0.892	0.887	1.878	1.548	1.873	1.408
	Treatment Prob(F)				0.7328	0.5142	0.6382	0.0339	0.0867	0.5975	0.6037	0.0316	0.0987	0.0323	0.1545

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Crop Code	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
					Part Rated	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -
					Rating Data Type	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2
					Rating Unit	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
					Rating Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011
					Trt-Eval Interval	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2
					# Subsamples, Dec.											
						89	90	91	92	93	94	95	96	97	98	99
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B		0.0 a	0.0 a	2.0 a	207.8 a	0.0 a	0.0 a	0.0 a	0.0 a	1.8 a	183.3 a	0.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B		0.3 a	108.8 a	0.5 a	86.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	127.5 a	0.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	113.8 a	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B		0.0 a	0.0 a	0.3 a	46.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B		0.0 a	0.0 a	1.0 a	124.8 a	0.3 a	24.0 a	0.0 a	0.0 a	1.0 a	116.0 a	0.5 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B		0.3 a	72.0 a	0.3 a	26.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	53.3 a	0.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B		0.0 a	0.0 a	0.3 a	30.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	37.3 a	0.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B		0.5 a	175.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	78.3 a	0.5 a	110.0 a	0.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B		0.3 a	106.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	45.5 a	0.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B		0.0 a	0.0 a	0.3 a	39.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	23.3 a	0.0 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B		0.8 a	202.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	57.0 a	0.5 a	86.0 a	0.3 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL					0.0 a	0.0 a	0.8 a	64.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	30.5 a	0.0 a
16	Clarity (1x)	0.5	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B		0.0 a	0.0 a	0.3 a	29.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B		0.0 a	0.0 a	1.3 a	159.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	21.3 a	0.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B		0.0 a	0.0 a	0.5 a	69.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	48.8 a	0.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B		0.0 a	0.0 a	0.5 a	49.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	104.8 a	0.0 a
	Durango (1/200 x)	0.00374	lb ae/a	B												

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	89	90	91	92	93	94	95	96	97	98	99
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -
	Rating Data Type				US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2
	Rating Unit				FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
	Rating Date				8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011
	Trt-Eval Interval				HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2
	# Subsamples, Dec.														
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	36.0 a	0.0 a	0.0 a	0.3 a	22.3 a	0.3 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
	LSD (P=.05)				0.60	190.69	1.34	159.77	0.21	26.08	0.21	58.31	1.24	164.45	0.37
	Standard Deviation				0.43	134.84	0.95	112.98	0.15	18.44	0.15	41.23	0.88	116.28	0.27
	CV				448.61	426.12	256.89	254.63	631.66	645.48	631.66	640.22	217.38	217.4	556.55
	Bartlett's X2				6.531	3.776	24.943	21.974	0.0	0.476	0.0	0.294	22.082	22.036	2.051
	P(Bartlett's X2)				0.163	0.437	0.009*	0.025*	.	0.49	.	0.588	0.077	0.078	0.359
	Replicate F				1.913	1.964	0.119	0.163	2.105	2.016	2.105	2.049	0.021	0.264	1.356
	Replicate Prob(F)				0.1371	0.1289	0.9485	0.9209	0.1090	0.1212	0.1090	0.1165	0.9960	0.8511	0.2649
	Treatment F				0.887	0.867	1.185	1.060	1.000	1.000	1.000	1.000	1.016	0.854	0.932
	Treatment Prob(F)				0.6032	0.6265	0.2980	0.4131	0.4756	0.4756	0.4756	0.4756	0.4580	0.6419	0.5512

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -
Rating Data Type					GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1
Rating Unit					WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.															
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 b
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.0 a	0.0 a	0.0 a	2.8 a	233.5 a	0.3 a	17.8 a	0.0 a	0.0 a	3.0 a	363.8 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.0 a	0.0 a	0.0 a	1.0 b	89.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 ab	62.3 ab
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 b
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 ab	65.3 ab
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 b	0.0 b
7	CLARITY (1/50 X)	0.01	lb ae/a	B	45.5 a	0.3 a	61.0 a	0.8 b	88.3 a	0.0 a	0.0 a	0.0 a	0.0 a	2.5 ab	296.3 ab
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.0 a	0.3 a	86.0 a	0.3 b	20.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 ab	19.0 b
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.3 b	34.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 ab	92.8 ab
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.3 b	39.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 ab	78.3 ab
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0.0 a	0.5 a	186.0 a	0.0 b	0.0 a	0.3 a	43.3 a	0.0 a	0.0 a	0.0 b	0.0 b
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	0.0 a	0.5 a	189.5 a	0.3 b	35.5 a	0.3 a	25.8 a	0.0 a	0.0 a	1.5 ab	186.5 ab
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0.0 a	0.0 a	0.0 a	1.3 b	129.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 ab	54.8 ab
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	31.3 a	0.0 a	0.0 a	0.5 b	84.8 a	0.5 a	49.8 a	0.0 a	0.0 a	0.3 ab	50.8 ab
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0.0 a	0.0 a	0.0 a	0.5 b	78.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 ab	54.5 ab
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 ab	62.3 ab
17	Durango (1/100 x)	0.0075	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.3 b	29.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 ab	29.8 b
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.3 b	39.0 a	0.0 a	0.0 a	0.8 a	167.3 a	0.3 ab	17.3 b
19	Clarity (1/100 x)	0.005	lb ae/a	B	0.0 a	0.3 a	60.0 a	0.5 b	57.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 ab	87.0 ab
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.8 b	91.3 a	0.0 a	0.0 a	0.3 a	90.3 a	0.5 ab	54.8 ab
	Durango (1/200 x)	0.00374	lb ae/a	B											

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	100	101	102	103	104	105	106	107	108	109	110
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -
	Rating Data Type				GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1
	Rating Unit				WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
	Rating Date				8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/25/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
	Trt-Eval Interval				HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST2	HARVEST3	HARVEST3	HARVEST3	HARVEST3
	# Subsamples, Dec.														
21	Clarity (1/400 x)	0.00125	lb ae/a	B	25.8 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 a	0.5 a	162.5 a	0.0 b	0.0 b
	Durango (1/400 x)	0.00187	lb ae/a	B											
	LSD (P=.05)				37.38	0.51	179.17	1.29	134.74	0.41	44.50	0.58	154.26	1.54	182.36
	Standard Deviation				26.43	0.36	126.69	0.91	95.28	0.29	31.46	0.41	109.08	1.09	128.95
	CV				541.46	433.59	456.75	201.74	190.51	481.5	484.08	573.59	545.4	169.39	171.93
	Bartlett's X2				1.018	3.422	7.193	26.452	14.942	2.507	3.462	3.07	1.209	26.557	32.074
	P(Bartlett's X2)				0.601	0.49	0.126	0.015*	0.311	0.474	0.326	0.215	0.546	0.033*	0.006*
	Replicate F				1.246	1.064	1.237	0.210	0.243	1.304	1.509	0.851	1.019	1.084	1.325
	Replicate Prob(F)				0.3011	0.3713	0.3041	0.8894	0.8661	0.2813	0.2213	0.4715	0.3905	0.3627	0.2746
	Treatment F				0.919	0.830	0.861	1.939	1.461	0.884	0.896	0.915	0.910	2.120	2.215
	Treatment Prob(F)				0.5662	0.6694	0.6338	0.0254	0.1306	0.6066	0.5925	0.5710	0.5769	0.0133	0.0094

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	PEPPER PLANT1 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT1 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE1 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE 2 FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT2 - GRADE2 WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY FRUIT NO 8/31/2011 HARVEST3	PEPPER PLANT3 - US FANCY WT/grams 8/31/2011 HARVEST3	PEPPER PLANT3 - GRADE 1 FRUIT NO 8/31/2011 HARVEST3
	# Subsamples, Dec.				111	112	113	114	115	116	117	118	119	120	121
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.3 a	41.3 a	0.0 a	0.0 a	2.0 a	190.3 a	0.0 a	0.0 a	0.0 a	0.0 a	2.3 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.3 a	16.0 a	0.0 a	0.0 a	0.3 a	33.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	46.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.3 a	43.5 a	0.5 a	143.5 a	0.0 a	0.0 a	0.3 a	51.8 a	0.3 a	90.3 a	0.3 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0.3 a	17.3 a	0.3 a	49.5 a	1.8 a	213.5 a	0.5 a	29.8 a	0.0 a	0.0 a	0.8 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.5 a	25.5 a	0.0 a	0.0 a	0.3 a	31.5 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	83.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	54.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	0.3 a	18.8 a	0.0 a	0.0 a	0.3 a	29.5 a	0.3 a	12.8 a	0.0 a	0.0 a	1.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	96.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.5 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	31.5 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	24.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	29.5 a	0.8 a	37.0 a	0.0 a	0.0 a	1.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.3 a	25.0 a	0.0 a	0.0 a	2.0 a	278.0 a	0.0 a	0.0 a	0.8 a	175.0 a	0.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	0.5 a	17.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	0.3 a	15.0 a	0.3 a	98.5 a	0.8 a	65.3 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a
	Durango (1/200 x)	0.00374	lb ae/a	B											

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT1 -	PLANT1 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -
Rating Data Type					GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.															
					111	112	113	114	115	116	117	118	119	120	121
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.3 a	12.3 a	0.8 a	272.5 a	0.0 a	0.0 a	1.5 a	90.0 a	0.5 a	152.5 a	0.8 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					0.57	48.59	0.60	200.94	1.27	153.59	1.04	69.24	0.58	153.43	1.79
Standard Deviation					0.40	34.36	0.42	142.09	0.90	108.61	0.74	48.96	0.41	108.49	1.26
CV					283.04	310.99	505.4	529.05	179.81	188.92	476.95	464.68	570.87	545.38	200.18
Bartlett's X2					3.429	11.173	5.011	7.781	19.355	24.019	14.016	11.849	3.07	1.246	26.844
P(Bartlett's X2)					0.945	0.264	0.171	0.051	0.112	0.031*	0.007*	0.019*	0.215	0.536	0.03*
Replicate F					0.388	0.443	1.141	1.200	0.412	0.560	0.954	0.588	1.050	1.079	0.843
Replicate Prob(F)					0.7618	0.7234	0.3399	0.3177	0.7447	0.6434	0.4203	0.6254	0.3771	0.3651	0.4756
Treatment F					0.699	0.660	0.893	0.910	2.072	2.047	0.985	0.907	0.924	0.913	0.872
Treatment Prob(F)					0.8113	0.8486	0.5967	0.5767	0.0158	0.0173	0.4915	0.5806	0.5610	0.5735	0.6210

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -
Rating Data Type					GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
Rating Unit					WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.															
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	243.3 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	102.3 a	0.0 a	0.0 a	0.0 a	0.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	66.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	21.5 a	0.0 a	0.0 a	0.0 a	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	33.3 a	0.0 a	0.0 a	0.5 a	147.0 a	0.3 a	46.5 a	0.0 a	0.0 a	0.0 a	0.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	101.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	103.0 a	0.0 a	0.0 a	0.0 a	0.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	79.3 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	80.8 a	0.3 a	15.8 a	0.0 a	0.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	19.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	58.8 a	0.0 a	0.0 a	0.0 a	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	53.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	97.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	36.8 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	114.8 a	0.8 a	43.3 a	0.3 a	63.8 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	195.8 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	100.3 a	0.0 a	0.0 a	0.0 a	0.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				115.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	72.0 a	0.0 a	0.0 a	0.0 a	0.0 a
16	Clarity (1x)	0.5	lb ae/a	B	64.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	151.0 a	0.0 a	0.0 a	1.0 a	269.5 a	0.0 a	0.0 a	0.3 a	14.0 a	0.5 a	144.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	83.8 a	0.0 a	0.0 a	0.5 a	157.8 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	89.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	43.8 a	0.0 a	0.0 a	0.0 a	0.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	89.5 a	0.8 a	66.3 a	0.5 a	171.8 a	0.5 a	51.8 a	0.8 a	70.8 a	0.0 a	0.0 a
	Durango (1/200 x)	0.00374	lb ae/a	B											

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT3 -	PLANT3 -	PLANT3 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -
Rating Data Type					GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY
Rating Unit					WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011	8/31/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST3
# Subsamples, Dec.															
21	Clarity (1/400 x)	0.00125	lb ae/a	B	109.8 a	0.0 a	0.0 a	0.8 a	242.8 a	0.3 a	37.0 a	0.0 a	0.0 a	0.3 a	77.5 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					211.68	0.46	40.89	0.88	262.07	1.37	142.89	0.60	39.65	0.49	144.85
Standard Deviation					149.68	0.33	28.91	0.62	185.31	0.97	101.04	0.42	28.04	0.34	102.42
CV					203.55	916.52	916.52	475.72	468.3	239.14	231.64	443.71	409.58	480.62	485.25
Bartlett's X2					26.427	0.0	0.0	2.055	1.372	17.28	13.93	5.003	5.499	2.626	3.22
P(Bartlett's X2)					0.034*	.	.	0.561	0.712	0.139	0.305	0.172	0.139	0.453	0.359
Replicate F					0.855	1.000	1.000	1.258	1.277	1.169	1.179	0.533	0.279	1.212	1.263
Replicate Prob(F)					0.4695	0.3992	0.3992	0.2970	0.2905	0.3291	0.3253	0.6612	0.8402	0.3131	0.2953
Treatment F					0.787	1.000	1.000	0.877	0.872	0.680	0.687	1.187	1.612	0.879	0.885
Treatment Prob(F)					0.7179	0.4756	0.4756	0.6144	0.6202	0.8299	0.8227	0.2970	0.0796	0.6127	0.6058

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -
Rating Data Type					GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
# Subsamples, Dec.															
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	43.0 a	0.5 b	39.8 b	0.0 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.8 a	76.8 a	0.0 a	0.0 a	0.0 a	0.0 a	2.5 a	346.3 a	1.8 ab	162.5 ab	0.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.8 a	212.0 a	1.8 ab	139.3 ab	0.0 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	66.8 a	1.3 ab	65.3 ab	0.0 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.5 a	188.5 a	1.5 ab	85.8 ab	0.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	56.5 a	1.3 ab	75.8 ab	0.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0.8 a	84.0 a	1.3 a	102.3 a	0.0 a	0.0 a	1.5 a	203.5 a	3.0 ab	194.3 ab	0.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.8 a	71.5 a	1.0 a	55.0 a	0.0 a	0.0 a	1.5 a	184.5 a	3.0 ab	219.8 ab	0.0 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	1.0 a	99.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	136.3 a	2.3 ab	124.5 ab	0.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.5 a	50.8 a	0.0 a	0.0 a	0.0 a	0.0 a	2.0 a	226.8 a	6.3 a	403.8 a	0.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	65.3 a	1.5 ab	82.0 ab	0.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	2.5 a	322.3 a	0.3 a	15.0 a	0.0 a	0.0 a	2.5 a	334.5 a	3.3 ab	244.5 ab	0.0 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0.8 a	104.3 a	0.5 a	42.3 a	0.0 a	0.0 a	1.5 a	158.3 a	1.5 ab	90.3 ab	0.0 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	0.0 a	0.0 a	0.3 a	17.3 a	0.3 a	76.5 a	1.3 a	180.0 a	1.8 ab	133.8 ab	0.5 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0.3 a	31.0 a	0.5 a	57.3 a	0.0 a	0.0 a	0.8 a	112.0 a	0.5 b	41.8 b	0.0 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 ab	79.8 ab	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	0.5 a	77.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a	50.8 a	2.3 ab	127.8 ab	0.0 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.3 a	12.8 a	0.0 a	0.0 a	0.0 a	0.0 a	2.3 a	293.0 a	1.3 ab	95.5 ab	0.0 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	0.3 a	37.5 a	0.3 a	12.0 a	0.0 a	0.0 a	2.0 a	311.3 a	3.3 ab	230.3 ab	0.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	0.8 a	105.5 a	0.8 a	106.5 a	0.0 a	0.0 a	1.5 a	155.3 a	3.8 ab	226.8 ab	0.0 a
	Durango (1/200 x)	0.00374	lb ae/a	B											

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT1 -	PLANT2 -
Rating Data Type					GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					8/31/2011	8/31/2011	8/31/2011	8/31/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
Trt-Eval Interval					HARVEST3	HARVEST3	HARVEST3	HARVEST3	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
# Subsamples, Dec.															
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.8 a	132.5 a	0.0 a	0.0 a	0.0 a	0.0 a	0.3 a	29.5 a	0.3 b	23.8 b	0.0 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					1.28	161.48	1.05	90.51	0.15	47.22	2.18	290.77	2.93	188.59	0.31
Standard Deviation					0.91	114.18	0.74	64.00	0.11	33.39	1.54	205.60	2.07	133.35	0.22
CV					195.11	198.91	326.69	329.83	916.52	916.52	125.85	128.74	101.65	97.02	916.52
Bartlett's X2					18.233	25.198	13.977	20.059	0.0	0.0	23.712	29.93	28.764	21.037	0.0
P(Bartlett's X2)					0.109	0.014*	0.052	0.005*	.	.	0.207	0.053	0.093	0.395	.
Replicate F					0.208	0.551	0.603	0.972	1.000	1.000	1.591	1.938	0.611	0.332	1.000
Replicate Prob(F)					0.8905	0.6493	0.6155	0.4120	0.3992	0.3992	0.2009	0.1332	0.6107	0.8020	0.3992
Treatment F					1.654	1.737	1.003	1.106	1.000	1.000	1.017	1.022	1.753	1.840	1.000
Treatment Prob(F)					0.0691	0.0519	0.4725	0.3684	0.4756	0.4756	0.4570	0.4516	0.0491	0.0363	0.4756

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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
	Crop Code				PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
	Part Rated				PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -
	Rating Data Type				US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2
	Rating Unit				WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
	Rating Date				9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
	Trt-Eval Interval				HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
	# Subsamples, Dec.														
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	0.0 a	0.3 a	38.3 a	0.3 a	26.8 a	0.0 a	0.0 a	0.8 a	116.5 a	1.0 a	108.3 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	0.0 a	2.8 a	408.8 a	1.5 a	128.3 a	0.0 a	0.0 a	3.8 a	497.5 a	2.8 a	197.3 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	0.0 a	0.8 a	104.5 a	1.8 a	136.0 a	0.0 a	0.0 a	1.8 a	216.5 a	0.8 a	46.5 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	0.0 a	1.0 a	149.3 a	1.3 a	107.0 a	0.0 a	0.0 a	0.5 a	51.5 a	2.0 a	135.3 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	0.0 a	0.8 a	118.3 a	0.3 a	11.3 a	0.0 a	0.0 a	0.0 a	0.0 a	1.0 a	70.5 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	0.0 a	0.3 a	59.0 a	1.0 a	55.3 a	0.0 a	0.0 a	1.8 a	170.0 a	0.5 a	19.8 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	0.0 a	1.5 a	187.8 a	2.5 a	151.8 a	0.0 a	0.0 a	2.3 a	290.0 a	4.0 a	302.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	0.0 a	1.0 a	86.8 a	0.5 a	53.5 a	0.0 a	0.0 a	1.5 a	204.8 a	4.8 a	289.8 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	0.0 a	0.3 a	21.3 a	1.3 a	113.8 a	0.0 a	0.0 a	1.5 a	193.8 a	3.8 a	237.8 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	0.0 a	0.5 a	57.0 a	2.8 a	217.5 a	0.0 a	0.0 a	1.3 a	166.5 a	2.0 a	107.0 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	0.0 a	1.0 a	130.0 a	1.3 a	66.3 a	0.0 a	0.0 a	0.8 a	93.5 a	0.8 a	49.0 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	0.0 a	0.8 a	74.8 a	2.8 a	153.5 a	0.0 a	0.0 a	2.0 a	277.3 a	4.5 a	325.8 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B											
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	0.0 a	0.5 a	41.8 a	1.5 a	76.8 a	0.0 a	0.0 a	0.3 a	23.3 a	0.8 a	56.3 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B											
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	156.0 a	0.8 a	114.3 a	0.5 a	32.5 a	0.8 a	228.8 a	0.3 a	28.5 a	0.5 a	48.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B											
15	UNTREATED CONTROL				0.0 a	1.3 a	172.0 a	2.3 a	143.0 a	0.0 a	0.0 a	2.8 a	347.8 a	2.3 a	133.8 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a	0.0 a	0.0 a	1.0 a	77.5 a	0.0 a	0.0 a	0.0 a	0.0 a	1.3 a	97.8 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	0.0 a	0.3 a	21.8 a	1.0 a	59.3 a	0.0 a	0.0 a	0.0 a	0.0 a	1.5 a	83.0 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	0.0 a	0.8 a	87.0 a	0.5 a	40.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.8 a	44.3 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	0.0 a	0.3 a	32.3 a	4.3 a	258.3 a	0.0 a	0.0 a	0.3 a	42.3 a	3.5 a	237.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B											
20	Clarity (1/200 x)	0.0025	lb ae/a	B	0.0 a	0.8 a	102.3 a	2.5 a	156.0 a	0.0 a	0.0 a	1.3 a	135.5 a	1.3 a	108.5 a
	Durango (1/200 x)	0.00374	lb ae/a	B											

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	144	145	146	147	148	149	150	151	152	153	154
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT2 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -	PLANT3 -
Rating Data Type					US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2
Rating Unit					WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams
Rating Date					9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
Trt-Eval Interval					HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
# Subsamples, Dec.															
21	Clarity (1/400 x)	0.00125	lb ae/a	B	0.0 a	0.3 a	33.3 a	1.0 a	73.3 a	0.0 a	0.0 a	0.8 a	115.5 a	1.5 a	114.3 a
	Durango (1/400 x)	0.00187	lb ae/a	B											
LSD (P=.05)					96.29	1.62	207.46	2.47	177.26	0.46	141.19	2.15	277.93	2.48	186.61
Standard Deviation					68.08	1.15	146.70	1.75	125.34	0.33	99.83	1.52	196.53	1.76	131.95
CV					916.52	155.53	151.01	116.44	123.14	916.52	916.52	137.24	138.94	89.99	98.56
Bartlett's X2					0.0	26.315	35.432	32.248	27.453	0.0	0.0	23.911	25.787	14.403	18.31
P(Bartlett's X2)					.	0.122	0.012*	0.041*	0.123	.	.	0.091	0.057	0.809	0.567
Replicate F					1.000	0.108	0.229	1.254	0.931	1.000	1.000	0.610	1.101	3.054	2.692
Replicate Prob(F)					0.3992	0.9549	0.8760	0.2983	0.4313	0.3992	0.3992	0.6110	0.3559	0.0352	0.0541
Treatment F					1.000	1.090	1.441	1.352	1.040	1.000	1.000	1.804	1.823	2.467	2.004
Treatment Prob(F)					0.4756	0.3829	0.1395	0.1836	0.4327	0.4756	0.4756	0.0412	0.0385	0.0037	0.0202

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Crop Code	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
					Part Rated	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -
					Rating Data Type	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2
					Rating Unit	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
					Rating Date	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
					Trt-Eval Interval	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
					# Subsamples, Dec.											
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.3 a	16.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.5 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B		0.0 a	0.0 a	3.3 a	487.3 a	1.3 a	73.3 a	0.3 a	80.0 a	3.0 a	445.8 a	2.8 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	1.0 a	61.0 a	0.0 a	0.0 a	3.5 a	561.0 a	1.8 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B		0.0 a	0.0 a	2.0 a	282.5 ab	2.5 a	152.5 a	0.0 a	0.0 a	1.0 a	122.0 a	2.5 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B		0.3 a	57.3 a	1.3 a	141.5 ab	0.3 a	24.0 a	0.0 a	0.0 a	0.3 a	33.8 a	0.5 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B		0.0 a	0.0 a	0.3 a	33.3 b	1.5 a	106.8 a	0.0 a	0.0 a	0.8 a	95.8 a	1.3 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B		0.0 a	0.0 a	2.0 a	273.3 ab	1.5 a	104.0 a	0.0 a	0.0 a	2.3 a	329.5 a	3.5 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B		0.0 a	0.0 a	1.0 a	138.5 ab	2.3 a	116.3 a	0.0 a	0.0 a	0.3 a	22.8 a	4.3 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B		0.0 a	0.0 a	1.8 a	215.5 ab	1.5 a	85.3 a	0.0 a	0.0 a	1.0 a	122.8 a	0.8 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B		0.0 a	0.0 a	0.3 a	30.5 b	4.8 a	336.0 a	0.3 a	55.0 a	0.3 a	53.3 a	2.8 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B		0.0 a	0.0 a	0.3 a	57.5 b	0.3 a	16.8 a	0.8 a	278.5 a	0.5 a	43.5 a	0.5 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B		0.0 a	0.0 a	0.5 a	69.8 b	2.0 a	133.8 a	0.0 a	0.0 a	1.0 a	147.3 a	3.8 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B												
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B		0.0 a	0.0 a	1.8 a	195.3 ab	1.8 a	120.8 a	0.0 a	0.0 a	0.0 a	0.0 a	1.5 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B												
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B		0.0 a	0.0 a	1.5 a	237.8 ab	0.3 a	36.3 a	0.3 a	99.8 a	1.8 a	224.8 a	1.0 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B												
15	UNTREATED CONTROL					0.0 a	0.0 a	0.5 a	68.8 b	2.3 a	132.3 a	0.0 a	0.0 a	1.5 a	206.3 a	1.5 a
16	Clarity (1x)	0.5	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	1.3 a	123.3 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B		0.0 a	0.0 a	0.0 a	0.0 b	0.3 a	13.0 a	0.0 a	0.0 a	0.5 a	58.0 a	1.8 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B		0.0 a	0.0 a	0.3 a	29.3 b	1.3 a	88.0 a	0.0 a	0.0 a	0.3 a	38.0 a	1.8 a
19	Clarity (1/100 x)	0.005	lb ae/a	B		0.0 a	0.0 a	1.8 a	199.3 ab	3.0 a	217.8 a	0.0 a	0.0 a	2.0 a	329.0 a	1.3 a
	Durango (1/100 x)	0.0075	lb ae/a	B												
20	Clarity (1/200 x)	0.0025	lb ae/a	B		0.0 a	0.0 a	0.3 a	35.8 b	1.3 a	70.8 a	0.0 a	0.0 a	0.8 a	78.3 a	3.8 a
	Durango (1/200 x)	0.00374	lb ae/a	B												

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code											
Crop Code					PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER	PEPPER
Part Rated					PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT4 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -	PLANT5 -
Rating Data Type					US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2	GRADE2	US FANCY	US FANCY	GRADE 1	GRADE1	GRADE 2
Rating Unit					FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO	WT/grams	FRUIT NO
Rating Date					9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011	9/9/2011
Trt-Eval Interval					HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4	HARVEST4
# Subsamples, Dec.															
21	Clarity (1/400 x) Durango (1/400 x)	0.00125 0.00187	lb ae/a lb ae/a	B B	0.0 a	0.0 a	1.5 a	233.5 ab	2.8 a	193.8 a	0.0 a	0.0 a	0.3 a	44.8 a	0.3 a
					155	156	157	158	159	160	161	162	163	164	165
LSD (P=.05)					0.15	35.34	1.78	238.41	2.50	168.07	0.52	188.46	2.13	322.68	2.43
Standard Deviation					0.11	24.99	1.26	168.58	1.77	118.84	0.37	133.26	1.51	228.17	1.72
CV					916.52	916.52	132.34	129.73	112.54	112.36	517.26	545.25	152.4	162.08	96.39
Bartlett's X2					0.0	0.0	26.625	24.659	34.602	30.505	6.463	9.234	36.202	46.392	21.555
P(Bartlett's X2)					.	.	0.046*	0.076	0.022*	0.062	0.091	0.026*	0.004*	0.001*	0.307
Replicate F					1.000	1.000	1.719	0.937	1.797	1.229	1.977	1.834	1.867	2.210	0.477
Replicate Prob(F)					0.3992	0.3992	0.1727	0.4284	0.1575	0.3071	0.1271	0.1506	0.1448	0.0962	0.6996
Treatment F					1.000	1.000	2.087	2.314	1.600	1.681	0.942	0.950	1.769	1.872	2.163
Treatment Prob(F)					0.4756	0.4756	0.0150	0.0065	0.0829	0.0629	0.5402	0.5305	0.0464	0.0324	0.0114

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID: PEPPERHERBDRIFTW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Crop Code				PEPPER
Part Rated				PLANT5 -
Rating Data Type				GRADE2
Rating Unit				WT/grams
Rating Date				9/9/2011
Trt-Eval Interval				HARVEST4
# Subsamples, Dec.				
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	166
1	WEEDAR 64 (1 X)	0.75	lb ae/a	B	37.3 a
2	WEEDAR 64 (1/50 X)	0.015	lb ae/a	B	202.0 a
3	WEEDAR 64 (1/100 X)	0.0075	lb ae/a	B	120.3 a
4	WEEDAR 64 (1/150 X)	0.005	lb ae/a	B	134.3 a
5	WEEDAR 64 (1/200 X)	0.00374	lb ae/a	B	39.0 a
6	WEEDAR 64 (1/400 X)	0.00187	lb ae/a	B	84.0 a
7	CLARITY (1/50 X)	0.01	lb ae/a	B	198.0 a
8	CLARITY (1/100 X)	0.005	lb ae/a	B	288.3 a
9	CLARITY (1/150 X)	0.00333	lb ae/a	B	39.0 a
10	CLARITY (1/200 X)	0.0025	lb ae/a	B	151.3 a
11	CLARITY (1/400 X)	0.00125	lb ae/a	B	24.3 a
12	WEEDAR 64 (1/100 X)+	0.0075	lb ae/a	B	212.5 a
	DURANGO (1/100 X)	0.0075	lb ae/a	B	
13	WEEDAR 64 (1/200 X)+	0.00374	lb ae/a	B	113.5 a
	DURANGO (1/200 X)	0.00374	lb ae/a	B	
14	WEEDAR 64 (1/400 X)+	0.00187	lb ae/a	B	75.5 a
	DURANGO (1/400 X)	0.00187	lb ae/a	B	
15	UNTREATED CONTROL				118.5 a
16	Clarity (1x)	0.5	lb ae/a	B	0.0 a
17	Durango (1/100 x)	0.0075	lb ae/a	B	120.3 a
18	DURANGO (1/400 x)	0.00187	lb ae/a	B	136.3 a
19	Clarity (1/100 x)	0.005	lb ae/a	B	90.0 a
	Durango (1/100 x)	0.0075	lb ae/a	B	
20	Clarity (1/200 x)	0.0025	lb ae/a	B	233.3 a
	Durango (1/200 x)	0.00374	lb ae/a	B	

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The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	PEPPERHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	166
	Crop Code				PEPPER
	Part Rated				PLANT5 -
	Rating Data Type				GRADE2
	Rating Unit				WT/grams
	Rating Date				9/9/2011
	Trt-Eval Interval				HARVEST4
	# Subsamples, Dec.				
21	Clarity (1/400 x)	0.00125	lb ae/a	B	13.5 a
	Durango (1/400 x)	0.00187	lb ae/a	B	
	LSD (P=.05)				157.17
	Standard Deviation				111.14
	CV				96.01
	Bartlett's X2				21.322
	P(Bartlett's X2)				0.319
	Replicate F				0.557
	Replicate Prob(F)				0.6452
	Treatment F				1.986
	Treatment Prob(F)				0.0215

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

PEPPERS, BELL - EFFECT OF 2, 4-D AND DICAMBA SIMULATED DRIFT ON VEGETABLE INJURY AND YIELD

Trial ID:	PEPPERHERBDRIFTW 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
CM = CENTIMETER

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res. Assoc.
Affiliation: OARDC/The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA
Trial Status: ONE-YEAR/FINAL
Trial Reliability: RELIABLE
Initiation Date: 8/16/2011
Planned Completion Date: 9/30/2011

COOPERATOR/LANDOWNER

Cooperator: Rick Callendar
Org: Muck Corps ARS
Address 1: 4875 SR 103 SOUTH
City: Williard
State/Prov: OH
Postal Code: 44890
Country: USA
Phone No: 419-935-1201
Fax No: 419-935-0019

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: IR-4 has received a request for the minor use of clopyralid on radish bulbs, and radish seed for control of weeds. The purpose of this research is to collect crop safety data to support pesticide registration according to parameters outlined in the request. A radish seed germination test was performed under the supervision of Rick Callendar as outlined in the protocol prior to seeding. Average germination was 97%.
Conclusions: Results indicate that the pendimethalin rates used in this trial proved safe on the variety used. There were no significant yield differences between the pendimethalin treatments and the weed free control plots.
As far as weed control, Dual Magnum applied PRE provided 73% control of purslane at 2 and 3 weeks after treatment. Chlopyralid (1X rate) applied POST, provided 25% purslane control; the (2X rate) provided an average of 42% control of purslane at 1 and 2 weeks after application.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	POROL	Common purslane	Portulaca oleracea	

Crop 1: RAPSN RADISH **Variety:** CRIMSON GIANT
Planting Date: 8/16/2011 **Planting Method:** DIRECT SEED
Rate: 10 S/ROW-FT **Depth:** 0.5 IN
Row Spacing: 18 IN **Spacing Within Row:** 1 IN **Seed Bed:** SMOOTH
Soil Temperature: 85 F **Soil Moisture:** NORMAL **Emergence Date:** 8/24/2011

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RACOBL

MAINTENANCE

Field Prep./Maintenance: Log of Field Operations by Rick Callendar
Muck Crops Branch 2011

Trial Name: Radish IR4

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID:	RADISHCLOCROPTOL 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Willard, Ohio,	Investigator:	Dr. Douglas J. Doohan

Trial Number: 706142147
Crop: Radish
Variety:: Crimson Giant
Lot # D3369
Seed Companies: Seedway Seed Co.

Soil Preparaton and Planting Dates
(and misc. info.)
Cultivation (Plow Date) - north side
Whole Farm Disc Date 6/6/2011
Spring Fertilization (farm) - no spring fertilization

Irrigation Equip Used - Lines (pipe)

Planting direct-seeded
Trial Name Radish IR4
Plant to Plant Spacing 10 seeds per foot
Row to Row Spacing 18 inches
Separation Alleys NA

Planting Date 8/16/2011
Trial Area Disked Date 8/15/2011
Beds Made Date 8/15/2011
Trial Harvest Date 10/25/11
Trial Destroyed Date:11/6/2011

Equipment Used

Soil Preparation: Oliver Disk/4630 tractor PSI - 40
Planting Stan Hay Vacuum Seeder CK Sprayer is a PTO/pump driven sprayer
Destruction of Trial Oliver Disk/4630 tractor/Rotivator The speed at time of application is 2 mph
Equip Used in Chem Apps. Double Tank CK Sprayer GPA for CK Sprayer sprayer is 46.87 - 2011 GPA and CK Sprayer with 4630 tractor

SOIL DESCRIPTION

% Sand: 0	**% OM:** 40.17	**Texture:**	FINE
% Silt: 0	**pH:** 5.81	**Soil Name:**	MUCK SOIL
% Clay: 0	**CEC:** 72.1	**Fert. Level:**	EXCELLENT

Overall Moisture Conditions: NORMAL
Closest Weather Station: AT BRANCH **Distance:** 50 **Unit:** FT

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

APPLICATION DESCRIPTION

	A	B
Application Date:	8/17/2011	9/8/2011
Time of Day:	10:30 AM	10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BDCST	BDCST
Air Temp., Unit:	79.8 F	64.6 F
% Relative Humidity:	50.6	88
Wind Velocity, Unit:	2.3 MPH	3.6 MPH
Soil Temp., Unit:	73.6 F	65.7 F
Soil Moisture:	ADEQUATE	ADEQUATE
% Cloud Cover:	0	100

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	RAPSN PRE	RAPSN POST
Stage Scale:	NONE	4-6 LEAF
Height, Unit:	0 IN	3 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	POROL PRE	POROL POST
Stage Scale:	NONE	3-6" DIAM
Density, Unit:	NONE NONE	6 FT2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	40	40
Nozzle Type:	TTJETJ60	TTJETJ60
Nozzle Size:	11002VP	11002VP
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	4	4
Band Width, Unit:	60 IN	60 IN
Boom Height, Unit:	15 IN	15 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
4	DUAL MAGNUM	7.62	L	0.64	lb ai/a	PRE	A	6.718 ml/mx	104	201	304	401

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	CLOPYRALID 1X	3	L	0.25	lb ai/a	POST	B	6.666 ml/mx	102	203	302	403
3	CLOPYRALID 2X	3	L	0.50	lb ai/a	POST	B	13.33 ml/mx	103	204	301	402

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	WEED FREE CONTROL								101	202	303	404

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
8.332	ml	CLOPYRALID 1X	3	L	
16.665	ml	CLOPYRALID 2X	3	L	
8.398	ml	DUAL MAGNUM	7.62	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Rep	Blk								
4	4	401	4	402	3	403	2	404	1
3	3	301	3	302	2	303	1	304	4
2	2	201	4	202	1	203	2	204	3
1	1	101	1	102	2	103	3	104	4

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					RAPSN	RAPSN	RAPSN	RAPSN	POROL RAPSN	RAPSN	RAPSN	POROL RAPSN	RAPSN	RAPSN
	Crop Code														
	Part Rated					PLANT -	PLANT -	PLANT -	PLANT -	WEED -	PLANT -	PLANT -	WEED -	PLANT -	PLANT -
	Rating Data Type					CHLOROSIS	STUNT	CHLOROSIS	STUNT	CONTROL	CHLOROSIS	STUNT	CONTROL	CHLOROSIS	STUNT
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					8/24/2011	8/24/2011	8/31/2011	8/31/2011	8/31/2011	9/6/2011	9/6/2011	9/6/2011	9/13/2011	9/13/2011
	Trt-Eval Interval					1WATPRE	1WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE	1WATPOST	1WATPOST
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	WEED FREE CONTROL				101	0	0	0	0	100	0	0	100	0	0
					202	0	0	0	0	100	0	0	100	0	0
					303	0	0	0	0	100	0	0	100	0	0
					404	0	0	0	0	100	0	0	100	0	0
					Mean =	0	0	0	0	100	0	0	100	0	0
2	CLOPYRALID 1X	0.25	lb ai/a	B	102									0	0
					203									0	0
					302									0	0
					403									0	0
					Mean =	.	.	.	.	.	.	.	.	0	0
3	CLOPYRALID 2X	0.50	lb ai/a	B	103									0	0
					204									0	0
					301									0	0
					402									0	0
					Mean =	.	.	.	.	.	.	.	.	0	0
4	DUAL MAGNUM	0.64	lb ai/a	A	104	0	0	0	0	70	0	0	75		
					201	0	0	0	0	70	0	0	60		
					304	0	0	0	0	75	0	0	70		
					401	0	0	0	0	75	0	0	85		
					Mean =	0	0	0	0	73	0	0	73	.	.

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17
	Weed Code					POROL	RAPSN	RAPSN	POROL	RAPSN	RAPSN	RAPSN
	Crop Code					RAPSN	RAPSN	RAPSN	RAPSN	RAPSN	RAPSN	RAPSN
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	PLANT -	PLANT -	PLANT -
	Rating Data Type					CONTROL	CHLOROSIS	STUNT	CONTROL	NUMBER	TOTAL WT	AVE WT
	Rating Unit					%	%	%	%	PER 10'	KG	KG
	Rating Date					9/13/2011	9/21/2011	9/21/2011	9/21/2011	9/21/2011	9/21/2011	9/21/2011
	Trt-Eval Interval					1WATPOST	2WATPOST	2WATPOST	2WATPOST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 2	- 4
1	WEED FREE CONTROL				101	100	0	0	100	118	2.82	0.0238
					202	100	0	0	100	130	5.14	0.0395
					303	100	0	0	100	120	4.26	0.0355
					404	100	0	0	100	120	3.54	0.0295
					Mean =	100	0	0	100	122	3.94	0.0321
2	CLOPYRALID 1X	0.25	lb ai/a	B	102	25	0	0	35	130	3.74	0.0287
					203	30	0	0	40	113	4.20	0.0371
					302	20	0	0	25	118	3.88	0.0328
					403	10	0	0	15	124	3.40	0.0274
					Mean =	21	0	0	29	121	3.81	0.0315
3	CLOPYRALID 2X	0.50	lb ai/a	B	103	45	0	0	50	114	3.66	0.0321
					204	45	0	0	60	112	3.19	0.0284
					301	35	0	0	40	118	4.43	0.0375
					402	25	0	0	35	125	3.60	0.0288
					Mean =	38	0	0	46	117	3.72	0.0317
4	DUAL MAGNUM	0.64	lb ai/a	A	104					129	3.84	0.0297
					201					115	5.24	0.0455
					304					130	3.28	0.0253
					401					127	4.11	0.0323
					Mean =	.	.	.	.	125	4.12	0.0332

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID:	RADISHCLOCROPTOL 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Willard, Ohio,	Investigator:	Dr. Douglas J. Doohan

Weed Code
POROL = Portulaca oleracea
Crop Code
RAPSN = RADISH / RAPHANUS SATIVUS L. VAR. NIGER (MILL.) PERS.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Weed Code												
Crop Code			RAPSN	RAPSN	RAPSN	RAPSN	POROL RAPSN	RAPSN	RAPSN	POROL RAPSN	RAPSN	RAPSN	POROL RAPSN
Part Rated			PLANT -	PLANT -	PLANT -	PLANT -	WEED -	PLANT -	PLANT -	WEED -	PLANT -	PLANT -	WEED -
Rating Data Type			CHLOROSIS	STUNT	CHLOROSIS	STUNT	CONTROL	CHLOROSIS	STUNT	CONTROL	CHLOROSIS	STUNT	CONTROL
Rating Unit			%	%	%	%	%	%	%	%	%	%	%
Rating Date			8/24/2011	8/24/2011	8/31/2011	8/31/2011	8/31/2011	9/6/2011	9/6/2011	9/6/2011	9/13/2011	9/13/2011	9/13/2011
Trt-Eval Interval			1WATPRE	1WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE	1WATPOST	1WATPOST	1WATPOST
# Subsamples, Dec.			- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
1	WEED FREE CONTROL			0 a	0 a	0 a	0 a	100 a	0 a	0 a	100 a	0 a	0 a	100 a
2	CLOPYRALID 1X	0.25 lb ai/a	B									0 a	0 a	21 c
3	CLOPYRALID 2X	0.50 lb ai/a	B									0 a	0 a	38 b
4	DUAL MAGNUM	0.64 lb ai/a	A	0 a	0 a	0 a	0 a	73 b	0 a	0 a	73 b			
LSD (P=.05)				0.0	0.0	0.0	0.0	4.6	0.0	0.0	16.6	0.0	0.0	9.2
Standard Deviation				0.0	0.0	0.0	0.0	2.0	0.0	0.0	7.4	0.0	0.0	5.3
CV				0.0	0.0	0.0	0.0	2.37	0.0	0.0	8.53	0.0	0.0	10.08
Bartlett's X2				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.038
P(Bartlett's X2)				.	.	.	.	.	.	.	.	.	.	0.846
Replicate F				0.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	3.780
Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	0.5000	1.0000	1.0000	0.5000	1.0000	1.0000	0.0779
Treatment F				0.000	0.000	0.000	0.000	363.000	0.000	0.000	27.923	0.000	0.000	242.854
Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	0.0003	1.0000	1.0000	0.0132	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID: RADISHCLOCROPTOL 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Willard, Ohio, Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17
	Weed Code						POROL			
	Crop Code				RAPSN	RAPSN	RAPSN	RAPSN	RAPSN	RAPSN
	Part Rated				PLANT -	PLANT -	WEED -	PLANT -	PLANT -	PLANT -
	Rating Data Type				CHLOROSIS	STUNT	CONTROL	NUMBER	TOTAL WT	AVE WT
	Rating Unit				%	%	%	PER 10'	KG	KG
	Rating Date				9/21/2011	9/21/2011	9/21/2011	9/21/2011	9/21/2011	9/21/2011
	Trt-Eval Interval				2WATPOST	2WATPOST	2WATPOST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 2	- 4
1	WEED FREE CONTROL				0 a	0 a	100 a	122 a	3.94 a	0.0321 a
2	CLOPYRALID 1X	0.25	lb ai/a	B	0 a	0 a	29 c	121 a	3.81 a	0.0315 a
3	CLOPYRALID 2X	0.50	lb ai/a	B	0 a	0 a	46 b	117 a	3.72 a	0.0317 a
4	DUAL MAGNUM	0.64	lb ai/a	A				125 a	4.12 a	0.0332 a
	LSD (P=.05)				0.0	0.0	11.3	10.7	1.082	0.00892
	Standard Deviation				0.0	0.0	6.5	6.7	0.676	0.00557
	CV				0.0	0.0	11.16	5.48	17.36	17.36
	Bartlett's X2				0.0	0.0	0.0	0.353	3.365	2.017
	P(Bartlett's X2)				.	.	.	0.95	0.339	0.569
	Replicate F				0.000	0.000	3.803	0.716	1.465	2.151
	Replicate Prob(F)				1.0000	1.0000	0.0770	0.5671	0.2882	0.1638
	Treatment F				0.000	0.000	130.180	0.975	0.263	0.073
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.4464	0.8503	0.9730

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RADISH - CLOPYRALID NATURE OF CROP SAFETY ON RADISH BULB AND RADISH SEED
IR-4 (P10437)

Trial ID:	RADISHCLOCROPTOL 2011	Study Dir.:	Doug Doohan and Tim Koch
Location:	Willard, Ohio,	Investigator:	Dr. Douglas J. Doohan

Weed Code
POROL = Portulaca oleracea
Crop Code
RAPSN = RADISH / RAPHANUS SATIVUS L. VAR. NIGER (MILL.) PERS.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and T. Koch **Title:** Professor; Res Assoc.
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA
Trial Status: ONE-YEAR/FINAL
Trial Reliability: Reliable
Initiation Date: 4/8/2011
Planned Completion Date: 10/31/2011

COOPERATOR/LANDOWNER

Cooperator: Dave Maurer
Org: Maurer Farms
Address 1: 2901 Batdorf Rd
City: Wooster
State/Prov: OH
Postal Code: 44691
Country: USA
Phone No: 330-264-2285

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: To evaluate herbicide timing of Callisto and its effect on weed control, crop tolerance, and yield . Casoron at 100#/A was the standard bramble treatmennt to which the Callisto treatments were compared.
Conclusions: There were no significant yield differences among the treatments EXCEPT for Callisto at 3 oz PRE, which was significantly higher than the untreated control. Both application timings caused significant chlorosis on the raspberry plants. The PRE (dormant) application with Callisto at 3oz/A showed an average of 7% chlorosis from 1-3 weeks after treatment (WAT); the 6oz rate averaged 15% for the same time frame and was significantly different from the 3oz rate. The POST application showed an injury, averaging 23% chlorosis from 1-3 WAT.Weed control of the listed species was good in general; Casoron had better weed control of Canada thistle over Callisto at 6WAT PRE.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AGRASS	**an**	nual grass	Setaria, digitaria spp
2.	CARHI	**Ha**	iry bittercress	Cardamine hirsuta
3.	CIRAR	**Ca**	nada thistle	Cirsium arvense
4.	ERICA	**Ca**	nada horseweed	Conyza canadensis
5.	POASS	**Bl**	uegrass	Poa sp.
6.	SONOL	**An**	nual sowthistle	Sonchus oleraceus

Crop 1: RUBID RASPBERRY **Variety:** Black Mack
Planting Date: 5/15/2005 **Planting Method:** TRANSPLANTED - HAND
Depth: 3 IN **Perennial Age:** 6 YEAR
Row Spacing: 10 FT **Spacing Within Row:** 3 FT **Seed Bed:** MEDIUM
Soil Moisture: NORMAL

SITE AND DESIGN

Plot Width, Unit: 3 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RACOBL

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPBLWCCTCALLISW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

MAINTENANCE
Field Prep./Maintenance: Trial was maintained by Maurer Farms.

SOIL DESCRIPTION

% Sand: 16	**% OM:** 1.8	**Texture:**	SILT LOAM
% Silt: 72	**pH:** 5.5	**Soil Name:**	WOOSTER SILT LOAM
% Clay: 12	**CEC:** 7.2	**Fert. Level:**	GOOD

Overall Moisture Conditions: NORMAL
Closest Weather Station: OARDC **Distance:** 3 **Unit:** MI

APPLICATION DESCRIPTION

	A	B
Application Date:	4/8/2011	5/18/2011
Time of Day:	12:30 PM	10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BRODIR	BRODIR
Air Temp., Unit:	49.4 F	60.3 F
% Relative Humidity:	89	90
Wind Velocity, Unit:	5.6 MPH	0 MPH
Dew Presence (Y/N):		N
Soil Temp., Unit:	46.2 F	56.7 F
Soil Moisture:	ADEQUATE	ADEQUATE
% Cloud Cover:	100	80

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	RUBID PRE	RUBID POST
Stage Scale:	DORMANT	PRE-BLOOM
Height, Unit:	4 FT	4 FT

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPBLWCCTCALLISW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AGRAS PRE	AGRAS POST
Stage Scale:	NONE	2-3"
Density, Unit:	NONE NONE	30 M2
Weed 2 Code, Stage:	CARHI PRE	CARHI POST
Stage Scale:	BLOOM	NONE
Density, Unit:	4 M2	NONE NONE
Weed 3 Code, Stage:	CIRAR PRE	CIRAR POST
Stage Scale:	2-4 LF	6-12"
Density, Unit:	2 M2	2 M2
Weed 4 Code, Stage:	ERICA PRE	ERICA POST
Stage Scale:	NONE	3-4"
Density, Unit:	NONE NONE	2 M2
Weed 5 Code, Stage:	POASS PRE	POASS POST
Stage Scale:	NONE	3", BLOOM
Density, Unit:	NONE NONE	4 M2
Weed 6 Code, Stage:	SONOL PRE	SONOL POST
Stage Scale:	NONE	2-4"
Density, Unit:	NONE NONE	2 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	SPRAYER	SPRAYER
Operating Pressure:	40	40
Nozzle Type:	TTJET	TTJET
Nozzle Size:	11002VF	11002VF
Nozzles/Row:	1	1
Band Width, Unit:	18 IN	18 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	CALLISTO	4	SC	0.094	lb ai/a	PRE	A	1.88 ml/mx	103	201	303	405
4	CALLISTO	4	SC	0.187	lb ai/a	PRE	A	3.74 ml/mx	104	202	305	404
5	CASORON	4	G	4	lb ai/a	PRE	A	62.48 g/1 pl	105	203	302	406
6	CALLISTO+	4	SC	0.094	lb ai/a	PRE	A	1.88 ml/mx	106	204	306	403

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
6	CALLISTO+	4	SC	0.094	lb ai/a	POST	B	1.88 ml/mx	106	204	306	403
	NIS	100	L	0.25	% v/v	POST	B	4.999 ml/mx				

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	205	301	402
2	WEED-FREE CONTROL								102	206	304	401

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
7.024	ml	CALLISTO	4	SC	
312.390	g	CASORON	4	G	
4.699	ml	CALLISTO+	4	SC	
6.249	ml	NIS	100	L	

* 'Per area' calculations based on 4 replicates of 3 by 20 feet 'Plot' experimental units (area of one treatment).
* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk										
4	4	401	2	402	1	403	6	404	4	405	3	406	5
3	3	301	1	302	5	303	3	304	2	305	4	306	6
2	2	201	3	202	4	203	5	204	6	205	1	206	2
1	1	101	1	102	2	103	3	104	4	105	5	106	6

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					RUBUS	CARHI RUBUS	CIRAR RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS	CIRAR RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS
	Crop Code					PLANT -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -
	Part Rated					CHLOROSIS	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL
	Rating Data Type					%	%	%	%	%	%	%	%	%	%
	Rating Unit					4/15/2011	4/15/2011	4/15/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/29/2011	4/29/2011	4/29/2011
	Rating Date					1WATPRE	1WATPRE	1WATPRE	2WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE
	Trt-Eval Interval					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
	# Subsamples, Dec.														
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					205	0	0	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0	0	0
					402	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	0	100	100	0	100	100	100	0	100	100
					206	0	100	100	0	100	100	100	0	100	100
					304	0	100	100	0	0	100	100	0	100	100
					401	0	100	100	0	100	100	100	0	100	100
					Mean =	0	100	100	0	75	100	100	0	100	100
3	CALLISTO	0.094	lb ai/a	A	103	5	99	5	15	99	0	20	10	99	99
					201	5	99	5	15	50	0	20	10	99	99
					303	5	99	5	10	100	0	10	5	99	99
					405	10	99	5	15	99	0	30	10	99	99
					Mean =	6	99	5	14	87	0	20	9	99	99
4	CALLISTO	0.187	lb ai/a	A	104	10	99	10	10	99	0	90	25	99	99
					202	5	99	10	15	60	0	30	20	99	99
					305	10	99	10	10	50	0	30	20	99	99
					404	10	99	10	15	99	0	99	20	99	99
					Mean =	9	99	10	13	77	0	62	21	99	99
5	CASORON	4	lb ai/a	A	105	0	99	10	0	99	0	15	0	99	99
					203	0	99	10	0	0	0	10	0	99	99
					302	0	99	10	0	60	0	99	0	99	99
					406	0	99	10	0	99	0	15	0	99	99
					Mean =	0	99	10	0	65	0	35	0	99	99
6	CALLISTO+	0.094	lb ai/a	A	106	5	99	5	15	50	0	10	10	99	99
	CALLISTO+	0.094	lb ai/a	B	204	0	99	5	10	99	0	10	10	99	99
	NIS	0.25	% v/v	B	306	5	99	5	10	60	0	20	10	99	99
					403	5	99	5	10	50	0	99	10	99	99
					Mean =	4	99	5	11	65	0	35	10	99	99

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20
	Weed Code					CIRAR	RUBUS	CARHI	ERICA	CIRAR	RUBUS	CARHI	ERICA	CIRAR	RUBUS
	Crop Code					RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Part Rated					WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -
	Rating Data Type					CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS
	Rating Unit					%	%	%	%	%		%	%	%	%
	Rating Date					4/29/2011	5/6/2011	5/6/2011	5/6/2011	5/6/2011	5/20/2011	5/20/2011	5/20/2011	5/20/2011	5/25/2011
	Trt-Eval Interval					3WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	6WATPRE	6WATPRE	6WATPRE	6WATPRE	1WATPOST
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					205	0	0	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0	0	0
					402	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	100	0	100	100	100	0	100	100	100	0
					206	100	0	100	100	100	0	100	100	100	0
					304	100	0	100	100	100	0	100	100	100	0
					401	100	0	100	100	100	0	100	100	100	0
					Mean =	100	0	100	100	100	0	100	100	100	0
3	CALLISTO	0.094	lb ai/a	A	103	15	2	100	100	0	0	99	99	0	
					201	10	2	100	100	0	0	99	99	0	
					303	10	2	100	100	0	0	99	99	0	
					405	20	5	100	100	0	0	99	99	0	
					Mean =	14	3	100	100	0	0	99	99	0	.
4	CALLISTO	0.187	lb ai/a	A	104	99	10	100	100	90	0	99	99	85	
					202	15	5	100	100	5	0	99	99	0	
					305	30	10	100	100	25	0	99	99	0	
					404	99	15	100	100	100	0	99	99	90	
					Mean =	61	10	100	100	55	0	99	99	44	.
5	CASORON	4	lb ai/a	A	105	5	0	100	100	100	0	99	99	99	
					203	99	0	100	100	0	0	0	99	85	
					302	99	0	100	100	100	0	99	99	99	
					406	5	0	100	100	0	0	99	99	99	
					Mean =	52	0	100	100	50	0	74	99	96	.
6	CALLISTO+	0.094	lb ai/a	A	106	10	3	100	100	0	0	99	99	0	30
	CALLISTO+	0.094	lb ai/a	B	204	15	5	100	90	10	0	99	99	0	20
	NIS	0.25	% v/v	B	306	20	5	100	75	10	0	99	99	0	35
					403	15	5	100	100	100	0	99	99	0	20
					Mean =	15	5	100	91	30	0	99	99	0	26

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	AGRASS RUBUS WEED - CONTROL % 5/25/2011 1WATPOST - 0	POASS RUBUS WEED - CONTROL % 5/25/2011 1WATPOST - 0	ERICA RUBUS WEED - CONTROL % 5/25/2011 1WATPOST - 0	SONOL RUBUS WEED - CONTROL % 5/25/2011 1WATPOST - 0	CIRAR RUBUS WEED - CONTROL % 5/25/2011 1WATPOST - 0	RUBUS PLANT - CHLOROSIS % 6/8/2011 3WATPOST	AGRASS RUBUS WEED - CONTROL % 6/8/2011 3WATPOST	POASS RUBUS WEED - CONTROL % 6/8/2011 3WATPOST	ERICA RUBUS WEED - CONTROL % 6/8/2011 3WATPOST	SONOL RUBUS WEED - CONTROL % 6/8/2011 3WATPOST
						21	22	23	24	25	26	27	28	29	30
1	UNTREATED CONTROL				101	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
					205	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
					301	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
					402	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
					Mean =	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
2	WEED-FREE CONTROL				102	100	100	100	100	100	0.0	100.0	100.0	100.0	100.0
					206	100	100	100	100	100	0.0	100.0	100.0	100.0	100.0
					304	100	100	100	100	100	0.0	100.0	100.0	100.0	100.0
					401	100	100	100	100	100	0.0	100.0	100.0	100.0	100.0
					Mean =	100	100	100	100	100	0.0	100.0	100.0	100.0	100.0
3	CALLISTO	0.094	lb ai/a	A	103										
					201										
					303										
					405										
					Mean =	.	.	.	.	.	.	.	.	.	.
4	CALLISTO	0.187	lb ai/a	A	104										
					202										
					305										
					404										
					Mean =	.	.	.	.	.	.	.	.	.	.
5	CASORON	4	lb ai/a	A	105										
					203										
					302										
					406										
					Mean =	.	.	.	.	.	.	.	.	.	.
6	CALLISTO+	0.094	lb ai/a	A	106	95	0	99	40	30	20.0	80.0	0.0	99.0	0.0
	CALLISTO+	0.094	lb ai/a	B	204	95	0	99	40	50	20.0	85.0	0.0	99.0	0.0
	NIS	0.25	% v/v	B	306	90	0	99	40	50	20.0	80.0	0.0	99.0	0.0
					403	90	0	99	40	70	25.0	80.0	0.0	99.0	0.0
					Mean =	93	0	99	40	50	21.3	81.3	0.0	99.0	0.0

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	31	32	33	34	35	36	37	38	39	40
	Weed Code					CIRAR	RUBUS	AGRASS	POASS	ERICA	SONOL	CIRAR	RUBUS	RUBUS	RUBUS
	Crop Code					RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Part Rated					WEED -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -	FRUIT -	FRUIT -	FRUIT -
	Rating Data Type					CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	100 BERRY	YIELD/PLOT	100 BERRY
	Rating Unit					%	%	%	%	%	%	%	GRAMS	KG	GRAMS
	Rating Date					6/8/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	7/12/2011	7/12/2011	7/18/2011
	Trt-Eval Interval					3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	HARVEST1	HARVEST1	HARVEST2
	# Subsamples, Dec.												- 0	- 2	- 0
1	UNTREATED CONTROL				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	210	1.70	130
					205	0.0	0.0	0.0	0.0	0.0	0.0	0.0	180	1.04	120
					301	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220	0.34	160
					402	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220	1.71	170
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	208	1.20	145
2	WEED-FREE CONTROL				102	100.0	0.0	100.0	100.0	100.0	100.0	100.0	190	1.31	160
					206	100.0	0.0	100.0	100.0	100.0	100.0	100.0	190	1.78	180
					304	100.0	0.0	100.0	100.0	100.0	100.0	100.0	200	3.26	170
					401	100.0	0.0	100.0	100.0	100.0	100.0	100.0	190	2.13	180
					Mean =	100.0	0.0	100.0	100.0	100.0	100.0	100.0	193	2.12	173
3	CALLISTO	0.094	lb ai/a	A	103								180	2.47	180
					201								190	2.72	90
					303								180	3.03	160
					405								180	1.73	140
					Mean =	.	.	.	.	.	.	.	183	2.49	143
4	CALLISTO	0.187	lb ai/a	A	104								180	1.97	470
					202								170	1.92	160
					305								190	1.59	110
					404								230	1.04	150
					Mean =	.	.	.	.	.	.	.	193	1.63	223
5	CASORON	4	lb ai/a	A	105								170	0.14	150
					203								200	2.86	180
					302								170	2.17	170
					406								180	0.62	170
					Mean =	.	.	.	.	.	.	.	180	1.45	168
6	CALLISTO+	0.094	lb ai/a	A	106	30.0	15.0	0.0	0.0	0.0	0.0	0.0	180	0.16	150
	CALLISTO+	0.094	lb ai/a	B	204	25.0	10.0	0.0	0.0	0.0	0.0	0.0	200	2.16	160
	NIS	0.25	% v/v	B	306	20.0	10.0	0.0	0.0	0.0	0.0	0.0	190	2.17	130
					403	30.0	15.0	0.0	0.0	0.0	0.0	0.0	170	1.60	160
					Mean =	26.3	12.5	0.0	0.0	0.0	0.0	0.0	185	1.52	150

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	RUBUS FRUIT - YIELD/PLOT KG 7/18/2011 HARVEST2 - 2	RUBUS FRUIT - TOTAL YIELD KG 7/25/2011 H1+ H2 - 2
	Weed Code						
	Crop Code						
	Part Rated						
	Rating Data Type						
	Rating Unit						
	Rating Date						
	Trt-Eval Interval						
	# Subsamples, Dec.						
1	UNTREATED CONTROL				101	0.65	2.35
					205	0.55	1.59
					301	0.71	1.05
					402	0.63	2.34
					Mean =	0.64	1.83
2	WEED-FREE CONTROL				102	0.68	1.99
					206	0.62	2.40
					304	0.64	3.90
					401	0.69	2.82
					Mean =	0.66	2.78
3	CALLISTO	0.094	lb ai/a	A	103	0.71	3.18
					201	1.12	3.84
					303	0.59	3.62
					405	1.45	3.18
					Mean =	0.97	3.46
4	CALLISTO	0.187	lb ai/a	A	104	1.04	3.01
					202	0.54	2.46
					305	1.30	2.89
					404	0.97	2.01
					Mean =	0.96	2.59
5	CASORON	4	lb ai/a	A	105	1.25	1.39
					203	0.25	3.11
					302	0.64	2.81
					406	0.71	1.33
					Mean =	0.71	2.16
6	CALLISTO+	0.094	lb ai/a	A	106	0.83	0.99
	CALLISTO+	0.094	lb ai/a	B	204	0.77	2.86
	NIS	0.25	% v/v	B	306	0.69	2.86
					403	0.65	2.25
					Mean =	0.74	2.24

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPBLWCCTCALLISW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
CARHI = Cardamine hirsuta
CIRAR = Cirsium arvense
ERICA = Conyza canadensis
POASS = Poa sp.
SONOL = Sonchus oleraceus

Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

Rating Unit
% = PERCENT
KG = KILOGRAM

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RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				RUBUS	CARHI RUBUS	CIRAR RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS	CIRAR RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS	CIRAR RUBUS
	Crop Code														
	Part Rated				PLANT -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -
	Rating Data Type				CHLOROSIS	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				4/15/2011	4/15/2011	4/15/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/29/2011	4/29/2011	4/29/2011	4/29/2011
	Trt-Eval Interval				1WATPRE	1WATPRE	1WATPRE	2WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE	3WATPRE
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 d	0 c	0 d	0 b	0 b	0 b	0 b	0 c	0 c	0 c	0 b
2	WEED-FREE CONTROL				0 d	100 a	100 a	0 b	75 a	100 a	100 a	0 c	100 a	100 a	100 a
3	CALLISTO	0.094	lb ai/a	A	6 b	99 b	5 c	14 a	87 a	0 b	20 b	9 b	99 b	99 b	14 b
4	CALLISTO	0.187	lb ai/a	A	9 a	99 b	10 b	13 a	77 a	0 b	62 ab	21 a	99 b	99 b	61 ab
5	CASORON	4	lb ai/a	A	0 d	99 b	10 b	0 b	65 a	0 b	35 b	0 c	99 b	99 b	52 ab
6	CALLISTO+	0.094	lb ai/a	A	4 c	99 b	5 c	11 a	65 a	0 b	35 b	10 b	99 b	99 b	15 b
	CALLISTO+	0.094	lb ai/a	B											
	NIS	0.25	% v/v	B											
	LSD (P=.05)				2.3	0.0	0.0	2.8	48.0	0.0	44.2	2.1	0.0	0.0	47.4
	Standard Deviation				1.6	0.0	0.0	1.8	31.9	0.0	29.4	1.4	0.0	0.0	31.5
	CV				49.89	0.0	0.0	29.21	51.94	0.0	69.99	20.92	0.0	0.0	78.15
	Bartlett's X2				0.0	0.0	0.0	0.081	3.12	0.0	6.071	0.0	0.0	0.0	19.563
	P(Bartlett's X2)				.	.	.	0.96	0.538	.	0.108	.	.	.	0.001*
	Replicate F				2.714	0.000	0.000	1.250	1.398	0.000	0.988	1.429	0.000	0.000	0.027
	Replicate Prob(F)				0.0818	1.0000	1.0000	0.3268	0.2821	1.0000	0.4248	0.2737	1.0000	1.0000	0.9939
	Treatment F				23.400	0.000	0.000	57.000	3.838	0.000	5.684	148.714	0.000	0.000	5.732
	Treatment Prob(F)				0.0001	1.0000	1.0000	0.0001	0.0194	1.0000	0.0039	0.0001	1.0000	1.0000	0.0038

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21	22
	Weed Code				RUBUS	CARHI RUBUS	ERICA RUBUS	CIRAR RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS	CIRAR RUBUS	RUBUS	AGRASS RUBUS	POASS RUBUS
	Crop Code														
	Part Rated				PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -
	Rating Data Type				CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL
	Rating Unit				%	%	%	%		%	%	%	%	%	%
	Rating Date				5/6/2011	5/6/2011	5/6/2011	5/6/2011	5/20/2011	5/20/2011	5/20/2011	5/20/2011	5/25/2011	5/25/2011	5/25/2011
	Trt-Eval Interval				4WATPRE	4WATPRE	4WATPRE	4WATPRE	6WATPRE	6WATPRE	6WATPRE	6WATPRE	1WATPOST	1WATPOST	1WATPOST
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 c	0 b	0 b	0 b	0 a	0 b	0 c	0 c	0 b	0 c	0 b
2	WEED-FREE CONTROL				0 c	100 a	100 a	100 a	0 a	100 a	100 a	100 a	0 b	100 a	100 a
3	CALLISTO	0.094	lb ai/a	A	3 bc	100 a	100 a	0 b	0 a	99 a	99 b	0 c			
4	CALLISTO	0.187	lb ai/a	A	10 a	100 a	100 a	55 ab	0 a	99 a	99 b	44 b			
5	CASORON	4	lb ai/a	A	0 c	100 a	100 a	50 ab	0 a	74 a	99 b	96 a			
6	CALLISTO+	0.094	lb ai/a	A	5 b	100 a	91 a	30 ab	0 a	99 a	99 b	0 c	26 a	93 b	0 b
	CALLISTO+	0.094	lb ai/a	B											
	NIS	0.25	% v/v	B											
	LSD (P=.05)				2.6	0.0	7.3	54.5	0.0	30.5	0.0	30.9	7.5	2.9	0.0
	Standard Deviation				1.7	0.0	4.8	36.2	0.0	20.2	0.0	20.5	4.3	1.7	0.0
	CV				59.77	0.0	5.89	92.39	0.0	25.73	0.0	51.43	49.49	2.6	0.0
	Bartlett's X2				5.873	0.0	0.0	0.168	0.0	0.0	0.0	7.607	0.0	0.0	0.0
	P(Bartlett's X2)				0.053	.	.	0.919	.	.	.	0.006*	.	.	.
	Replicate F				1.745	0.000	1.000	0.919	0.000	1.000	0.000	1.194	1.000	1.000	0.000
	Replicate Prob(F)				0.2008	1.0000	0.4199	0.4556	1.0000	0.4199	1.0000	0.3456	0.4547	0.4547	1.0000
	Treatment F				21.192	0.000	278.731	4.412	0.000	15.482	0.000	21.863	49.000	4467.000	0.000
	Treatment Prob(F)				0.0001	1.0000	0.0001	0.0114	1.0000	0.0001	1.0000	0.0001	0.0002	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	23	24	25	26	27	28	29	30	31	32
	Weed Code				ERICA	SONOL	CIRAR		AGRASS	POASS	ERICA	SONOL	CIRAR	
	Crop Code				RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Part Rated				WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -	PLANT -
	Rating Data Type				CONTROL	CONTROL	CONTROL	CHLOROSIS	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CHLOROSIS
	Rating Unit				%	%	%	%	%	%	%	%	%	%
	Rating Date				5/25/2011	5/25/2011	5/25/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/29/2011
	Trt-Eval Interval				1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	6WATPOST
	# Subsamples, Dec.				- 0	- 0	- 0							
1	UNTREATED CONTROL				0 c	0 c	0 c	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b
2	WEED-FREE CONTROL				100 a	100 a	100 a	0.0 b	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	0.0 b
3	CALLISTO	0.094	lb ai/a	A										
4	CALLISTO	0.187	lb ai/a	A										
5	CASORON	4	lb ai/a	A										
6	CALLISTO+	0.094	lb ai/a	A	99 b	40 b	50 b	21.3 a	81.3 b	0.0 b	99.0 b	0.0 b	26.3 b	12.5 a
	CALLISTO+	0.094	lb ai/a	B										
	NIS	0.25	% v/v	B										
	LSD (P=.05)				0.0	0.0	16.3	2.50	2.50	0.00	0.00	0.00	4.78	2.88
	Standard Deviation				0.0	0.0	9.4	1.44	1.44	0.00	0.00	0.00	2.76	1.67
	CV				0.0	0.0	18.86	20.38	2.39	0.0	0.0	0.0	6.57	40.0
	Bartlett's X2				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)				.	.	.	.	.	.	.	.	.	.
	Replicate F				0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000	1.000	1.000
	Replicate Prob(F)				1.0000	1.0000	0.4547	0.4547	0.4547	1.0000	1.0000	1.0000	0.4547	0.4547
	Treatment F				0.000	0.000	112.500	289.000	5425.001	0.000	0.000	0.000	1407.546	75.000
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	0.0001	1.0000	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPBLWCCTCALLISW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	33	34	35	36	37	38	39	40	41	42
	Weed Code				AGRASS	POASS	ERICA	SONOL	CIRAR	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Crop Code				RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	FRUIT -	FRUIT -	FRUIT -	FRUIT -	FRUIT -
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	100 BERRY	YIELD/PLOT	100 BERRY	YIELD/PLOT	TOTAL YIELD
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
	Rating Unit				%	%	%	%	%	GRAMS	KG	GRAMS	KG	KG
	Rating Date				6/29/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	7/12/2011	7/12/2011	7/18/2011	7/18/2011	7/25/2011
	Trt-Eval Interval				6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	HARVEST1	HARVEST1	HARVEST2	HARVEST2	H1+ H2
	# Subsamples, Dec.									- 0	- 2	- 0	- 2	- 2
1	UNTREATED CONTROL				0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	208 a	1.20 a	145 a	0.64 a	1.83 a
2	WEED-FREE CONTROL				100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	193 a	2.12 a	173 a	0.66 a	2.78 a
3	CALLISTO	0.094	lb ai/a	A						183 a	2.49 a	143 a	0.97 a	3.46 a
4	CALLISTO	0.187	lb ai/a	A						193 a	1.63 a	223 a	0.96 a	2.59 a
5	CASORON	4	lb ai/a	A						180 a	1.45 a	168 a	0.71 a	2.16 a
6	CALLISTO+	0.094	lb ai/a	A	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	185 a	1.52 a	150 a	0.74 a	2.24 a
	CALLISTO+	0.094	lb ai/a	B										
	NIS	0.25	% v/v	B										
	LSD (P=.05)				0.00	0.00	0.00	0.00	0.00	24.8	1.189	108.1	0.412	1.042
	Standard Deviation				0.00	0.00	0.00	0.00	0.00	16.5	0.789	71.7	0.274	0.691
	CV				0.0	0.0	0.0	0.0	0.0	8.67	45.5	43.03	35.15	27.55
	Bartlett's X2				0.0	0.0	0.0	0.0	0.0	10.075	4.046	33.534	20.315	3.82
	P(Bartlett's X2)				.	.	.	.	.	0.073	0.543	0.001*	0.001*	0.576
	Replicate F				0.000	0.000	0.000	0.000	0.000	0.410	1.650	0.870	0.822	1.351
	Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.7483	0.2201	0.4781	0.5019	0.2954
	Treatment F				0.000	0.000	0.000	0.000	0.000	1.475	1.468	0.697	1.187	2.722
	Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.2556	0.2580	0.6338	0.3613	0.0607

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, BLACK - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPBLWCCTCALLISW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
CARHI = Cardamine hirsuta
CIRAR = Cirsium arvense
ERICA = Conyza canadensis
POASS = Poa sp.
SONOL = Sonchus oleraceus

Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and T. Koch **Title:** Professor, Res. Assoc.
Affiliation: OARDC/The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA

Trial Status: ONE-YEAR/FINAL
Trial Reliability: RELIABLE
Initiation Date: 4/15/2011
Planned Completion Date: 8/31/2011

COOPERATOR/LANDOWNER

Cooperator: Dave Maurer
Org: Maurer Farm
Address 1: 2901 Batdoef Rd
City: Wooster
State/Prov: Ohio
Postal Code: 44691

Country: USA
Phone No: 330 264 2285

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: The objective was to evaluate the timing of Callisto on crop tolerance, weed control, and yield on Encore red raspberries. Casoron at 100#/A was the standard raspberry herbicide treatment to which Callisto was compared.
Conclusions: There was no significant yield differences among the treatments.The was minor significant chlorosis with Callisto oz/A at 2 & 3 weeks after treatment (WAT).There was high significant chlorosis with the POSTapplication from 1-6 WAT
Weed control with the sprayed treatments was good in general with listed species. Casoron had much better control with ground ivy than with Callisto.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	AGRASS	**an**	nual grasses	various
2.	CARHI	**Ha**	iry bittercress	Cardamine hirsuta
3.	ERICA	**Ca**	nada horseweed	Conyza canadensis
4.	GLEHE	**Gr**	ound ivy	Glechoma hederacea
5.	RUMOB	**Br**	oad-leaf dock	Rumex obtusifolius

Crop 1: RUBID RASPBERRY **Variety:** ENCORE
Planting Date: 5/15/2005 **Planting Method:** TRANSPLANTED - HAND
Depth: 3 IN **Perennial Age:** 10 YEAR
Row Spacing: 10 FT
Soil Moisture: NORMAL

SITE AND DESIGN

Plot Width, Unit: 3 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: FIELD
Tillage Type: NO-TILL **Study Design:** RACOBL

MAINTENANCE

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Field Prep./Maintenance: Trial was maintained by Maurer Farms.

SOIL DESCRIPTION

% Sand: 16 **% OM:** 1.8 **Texture:** SILT LOAM
% Silt: 72 **pH:** 5.5 **Soil Name:** WOOSTER SILT LOAM
% Clay: 12 **CEC:** 7.2 **Fert. Level:** GOOD

Overall Moisture Conditions: NORMAL
Closest Weather Station: OARDC **Distance:** 3 **Unit:** MI

APPLICATION DESCRIPTION

	A	B
Application Date:	4/15/2011	5/18/2011
Time of Day:	10:30 AM	11:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BRODIR	BRODIR
Air Temp., Unit:	55.2 F	59.5 F
% Relative Humidity:	61.7	91.4
Wind Velocity, Unit:	8.0 MPH	5.0 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	48.6 F	57.9 F
Soil Moisture:	ADEQUATE	ADEQUATE
% Cloud Cover:	0	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	RUBID PRE	RUBID POST
Stage Scale:	DORMANT	PRE-BLOOM
Height, Unit:	6 FT	6 FT

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AGRAS PRE	AGRAS POST
Stage Scale:	NONE	2 LF
Density, Unit:	NONE NONE	25 M2
Weed 2 Code, Stage:	CARHI PRE	CARHI POST
Stage Scale:	BLOOM	NONE
Density, Unit:	10 M2	NONE NONE
Weed 3 Code, Stage:	ERICA PRE	ERICA POST
Stage Scale:	2"	NONE
Density, Unit:	2 M2	NONE NONE
Weed 4 Code, Stage:	GLEHE PRE	GLEHE POST
Stage Scale:	1"	9"
Density, Unit:	50+ M2	50+ M2
Weed 5 Code, Stage:	RUMOB PRE	RUMOB POST
Stage Scale:	3 LF	2-5" DIAM
Density, Unit:	2 M2	2 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	SPRAYER	SPRAYER
Operating Pressure:	40	40
Nozzle Type:	TTJ60	TTJ60
Nozzle Size:	11002 VP	11002 VP
Nozzles/Row:	1	1
Band Width, Unit:	18 IN	18 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Spray Volume, Unit:	25	25
Propellant:	CO2	CO2

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	CALLISTO	4	SC	0.094	lb ai/a	PRE	A	1.88 ml/mx	103	201	303	405
4	CALLISTO	4	SC	0.187	lb ai/a	PRE	A	3.74 ml/mx	104	202	305	404
5	CASORON	4	G	4	lb ai/a	PRE	A	62.48 g/1 pl	105	203	302	406
6	CALLISTO+	4	SC	0.094	lb ai/a	PRE	A	1.88 ml/mx	106	204	306	403

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RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
6	CALLISTO+	4	SC	0.094	lb ai/a	POST	B	1.88 ml/mx	106	204	306	403
	NIS	100	L	0.25	% v/v	POST	B	4.999 ml/mx				

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RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 3 by 20 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .52141)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	205	301	402
2	WEED-FREE CONTROL								102	206	304	401

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
7.024	ml	CALLISTO	4	SC	
312.390	g	CASORON	4	G	
4.699	ml	CALLISTO+	4	SC	
6.249	ml	NIS	100	L	

* 'Per area' calculations based on 4 replicates of 3 by 20 feet 'Plot' experimental units (area of one treatment).
* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk										
4	4	401	2	402	1	403	6	404	4	405	3	406	5
3	3	301	1	302	5	303	3	304	2	305	4	306	6
2	2	201	3	202	4	203	5	204	6	205	1	206	2
1	1	101	1	102	2	103	3	104	4	105	5	106	6

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RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10
	Weed Code					RUBUS	CARHI RUBUS	ERICA RUBUS	GLEHE RUBUS	RUBUS	CARHI RUBUS	ERICA RUBUS	GLEHE RUBUS	RUBUS	AGRASS RUBUS
	Crop Code														
	Part Rated					PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED
	Rating Data Type					CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					4/29/2011	4/29/2011	4/29/2011	4/29/2011	5/6/2011	5/6/2011	5/6/2011	5/6/2011	5/20/2011	5/20/2011
	Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE	3WATPRE	6WATPRE	6WATPRE
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					205	0	0	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0	0	0
					402	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	0	100	100	100	0	100	100	100	0	100
					206	0	100	100	100	0	100	100	100	0	100
					304	0	100	100	100	0	100	100	100	0	100
					401	0	100	100	100	0	100	100	100	0	100
					Mean =	0	100	100	100	0	100	100	100	0	100
3	CALLISTO	0.094	lb ai/a	A	103	5	95	99	10	2	99	99	2	0	80
					201	5	99	99	15	0	99	99	3	0	50
					303	0	99	99	20	0	99	99	0	0	80
					405	0	10	10	10	2	99	15	3	0	75
					Mean =	3	76	77	14	1	99	78	2	0	71
4	CALLISTO	0.187	lb ai/a	A	104	10	99	30	15	2	99	99	5	0	80
					202	0	99	25	25	3	99	99	5	10	50
					305	5	0	25	25	2	99	99	5	0	70
					404	5	90	30	10	4	99	99	5	0	75
					Mean =	5	72	28	19	3	99	99	5	3	69
5	CASORON	4	lb ai/a	A	105	0	0	99	0	0	99	99	70	0	85
					203	0	0	99	0	0	99	99	7	0	85
					302	0	0	99	0	0	99	99	50	0	85
					406	0	0	99	0	0	99	0	60	0	75
					Mean =	0	0	99	0	0	99	74	47	0	83
6	CALLISTO+	0.094	lb ai/a	A	106	5	99	99	10	2	99	99	3	0	90
	CALLISTO+	0.094	lb ai/a	B	204	5	99	99	15	0	95	0	5	0	90
	NIS	0.25	% v/v	B	306	0	60	30	5	0	90	15	10	0	90
					403	0	70	20	10	2	99	99	2	0	90
					Mean =	3	82	62	10	1	96	53	5	0	90

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	11	12	13	14	15	16	17	18	19	20
	Weed Code					ERICA RUBUS	GLEHE RUBUS	RUBUS	AGRASS RUBUS	ERICA RUBUS	GLEHE RUBUS	RUBUS	AGRASS RUBUS	ERICA RUBUS	GLEHE RUBUS
	Crop Code														
	Part Rated					WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED
	Rating Data Type					-	-	-	-	-	-	-	-	-	-
	Rating Unit					INJURY	INJURY	CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY	INJURY	INJURY
	Rating Date					%	%	%	%	%	%	%	%	%	%
	Trt-Eval Interval					5/20/2011	5/20/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011
	# Subsamples, Dec.					6WATPRE - 0	6WATPRE - 0	1WATPOST - 0	1WATPOST - 0	1WATPOST - 0	1WATPOST - 0	3WATPOST - 0	3WATPOST - 0	3WATPOST - 0	3WATPOST - 0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					205	0	0	0	0	0	0	0	0	0	0
					301	0	0	0	0	0	0	0	0	0	0
					402	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	100	100	0	100	100	100	0	100	100	100
					206	100	100	0	100	100	100	0	100	100	100
					304	100	100	0	100	100	100	0	100	100	100
					401	100	100	0	100	100	100	0	100	100	100
					Mean =	100	100	0	100	100	100	0	100	100	100
3	CALLISTO	0.094	lb ai/a	A	103	99	0								
					201	99	5								
					303	99	0								
					405	50	50								
					Mean =	87	14	.	.	.	.	.	.	.	.
4	CALLISTO	0.187	lb ai/a	A	104	99	10								
					202	99	10								
					305	99	5								
					404	50	50								
					Mean =	87	19	.	.	.	.	.	.	.	.
5	CASORON	4	lb ai/a	A	105	99	50								
					203	99	80								
					302	99	99								
					406	50	50								
					Mean =	87	70	.	.	.	.	.	.	.	.
6	CALLISTO+	0.094	lb ai/a	A	106	99	50	25	90	99	50	20	80	99	10
	CALLISTO+	0.094	lb ai/a	B	204	99	50	40	80	99	50	15	70	99	10
	NIS	0.25	% v/v	B	306	99	50	45	85	40	50	15	70	99	10
					403	99	50	45	90	99	99	15	75	99	10
					Mean =	99	50	39	86	84	62	16	74	99	10

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	RUBUS PLANT - CHLOROSIS % 6/29/2011 6WATPOST - 0 (21)	AGRASS RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0 (22)	ERICA RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0 (23)	GLEHE RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0 (24)	RUBUS FRUIT - YIELD GRAMS 6/23/2011 HARV 1 - 0 (25)	RUBUS FRUIT - YIELD GRAMS 6/30/2011 HARV 2 - 0 (26)	RUBUS FRUIT - YIELD GRAMS 7/7/2011 HARV 3 - 0 (27)	RUBUS FRUIT - TOTAL YIELD KG 7/14/2011 H1+H2+H3 - 2 (28)
1	UNTREATED CONTROL				101	0	0	0	0	454	1290	874	2.62
					205	0	0	0	0	624	1270	1167	3.06
					301	0	0	0	0	397	1150	1560	3.11
					402	0	0	0	0	255	1110	879	2.24
					Mean =	0	0	0	0	433	1205	1120	2.76
2	WEED-FREE CONTROL				102	0	100	100	100	397	1720	853	2.97
					206	0	100	100	100	340	940	1078	2.36
					304	0	100	100	100	340	1640	1683	3.66
					401	0	100	100	100	227	1660	971	2.85
					Mean =	0	100	100	100	326	1490	1146	2.96
3	CALLISTO	0.094	lb ai/a	A	103					312	1160	1293	2.77
					201					142	800	1016	1.96
					303					454	1040	1239	2.73
					405					198	740	969	1.90
					Mean =	.	.	.	.	277	935	1129	2.34
4	CALLISTO	0.187	lb ai/a	A	104					454	1530	827	2.81
					202					227	1090	1346	2.66
					305					482	1440	1293	3.21
					404					425	1670	1196	3.29
					Mean =	.	.	.	.	397	1433	1166	2.99
5	CASORON	4	lb ai/a	A	105					397	980	1828	3.20
					203					227	1090	985	2.30
					302					397	1510	2213	4.12
					406					142	690	845	1.67
					Mean =	.	.	.	.	291	1068	1468	2.82
6	CALLISTO+	0.094	lb ai/a	A	106	5	0	0	0	283	950	1182	2.42
	CALLISTO+	0.094	lb ai/a	B	204	5	0	0	0	454	1050	821	2.33
	NIS	0.25	% v/v	B	306	10	0	0	0	482	1600	1065	3.14
					403	15	0	0	0	340	1500	896	2.73
					Mean =	9	0	0	0	390	1275	991	2.65

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPREDWCCTCALLW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
CARHI = Cardamine hirsuta
ERICA = Conyza canadensis
GLEHE = Glechoma hederacea
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				RUBUS	CARHI	ERICA	GLEHE	RUBUS	CARHI	ERICA	GLEHE	RUBUS	AGRASS	ERICA
	Crop Code				RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Part Rated				PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -
	Rating Data Type				CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY	INJURY
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				4/29/2011	4/29/2011	4/29/2011	4/29/2011	5/6/2011	5/6/2011	5/6/2011	5/6/2011	5/20/2011	5/20/2011	5/20/2011
	Trt-Eval Interval				2WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE	3WATPRE	3WATPRE	3WATPRE	6WATPRE	6WATPRE	6WATPRE
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 a	0 b	0 c	0 d	0 b	0 c	0 b	0 c	0 a	0 d	0 b
2	WEED-FREE CONTROL				0 a	100 a	100 a	100 a	0 b	100 a	100 a	100 a	0 a	100 a	100 a
3	CALLISTO	0.094	lb ai/a	A	3 a	76 a	77 a	14 bc	1 b	99 ab	78 a	2 c	0 a	71 c	87 a
4	CALLISTO	0.187	lb ai/a	A	5 a	72 a	28 bc	19 b	3 a	99 ab	99 a	5 c	3 a	69 c	87 a
5	CASORON	4	lb ai/a	A	0 a	0 b	99 a	0 d	0 b	99 ab	74 a	47 b	0 a	83 bc	87 a
6	CALLISTO+	0.094	lb ai/a	A	3 a	82 a	62 ab	10 c	1 b	96 b	53 a	5 c	0 a	90 ab	99 a
	CALLISTO+	0.094	lb ai/a	B											
	NIS	0.25	% v/v	B											
	LSD (P=.05)				3.4	41.0	35.7	5.7	1.0	2.6	52.7	17.4	3.1	11.5	20.2
	Standard Deviation				2.2	27.2	23.7	3.8	0.7	1.7	34.9	11.5	2.0	7.6	13.4
	CV				134.16	49.49	38.9	16.0	86.03	2.12	51.84	43.62	489.9	11.06	17.53
	Bartlett's X2				0.486	2.081	12.083	1.192	0.128	0.0	0.162	19.493	0.0	2.884	0.0
	P(Bartlett's X2)				0.784	0.353	0.002*	0.551	0.938	.	0.922	0.001*	.	0.236	.
	Replicate F				1.667	1.284	1.830	1.635	2.725	1.000	0.767	0.884	1.000	1.995	5.000
	Replicate Prob(F)				0.2166	0.3159	0.1850	0.2235	0.0811	0.4199	0.5302	0.4717	0.4199	0.1580	0.0134
	Treatment F				3.333	10.299	11.493	401.885	10.006	2131.455	4.562	48.293	1.000	87.923	32.102
	Treatment Prob(F)				0.0319	0.0002	0.0001	0.0001	0.0002	0.0001	0.0099	0.0001	0.4509	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21
	Weed Code				GLEHE		AGRASS	ERICA	GLEHE		AGRASS	ERICA	GLEHE	
	Crop Code				RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS	RUBUS
	Part Rated				WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -
	Rating Data Type				INJURY	CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS	INJURY	INJURY	INJURY	CHLOROSIS
	Rating Unit				%	%	%	%	%	%	%	%	%	%
	Rating Date				5/20/2011	5/25/2011	5/25/2011	5/25/2011	5/25/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/29/2011
	Trt-Eval Interval				6WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	6WATPOST
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 c	0 b	0 c	0 b	0 c	0 b	0 c	0 c	0 c	0 b
2	WEED-FREE CONTROL				100 a	0 b	100 a	100 a	100 a	0 b	100 a	100 a	100 a	0 b
3	CALLISTO	0.094	lb ai/a	A	14 c									
4	CALLISTO	0.187	lb ai/a	A	19 c									
5	CASORON	4	lb ai/a	A	70 b									
6	CALLISTO+	0.094	lb ai/a	A	50 b	39 a	86 b	84 a	62 b	16 a	74 b	99 b	10 b	9 a
	CALLISTO+	0.094	lb ai/a	B										
	NIS	0.25	% v/v	B										
	LSD (P=.05)				25.0	9.5	4.8	29.5	24.5	2.5	4.8	0.0	0.0	4.8
	Standard Deviation				16.6	5.5	2.8	17.0	14.1	1.4	2.8	0.0	0.0	2.8
	CV				39.52	42.31	4.45	27.73	26.15	26.65	4.77	0.0	0.0	94.76
	Bartlett's X2				0.075	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)				0.963	.	.	.	.	.	.	.	.	.
	Replicate F				0.829	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	1.000
	Replicate Prob(F)				0.4983	0.4547	0.4547	0.4547	0.4547	0.4547	0.4547	1.0000	1.0000	0.4547
	Treatment F				21.154	67.047	1538.455	39.865	50.979	169.000	1407.546	0.000	0.000	13.364
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0003	0.0002	0.0001	0.0001	1.0000	1.0000	0.0062

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID: RASPREDWCCTCALLW 2011 Study Dir.: Doug Doohan and T. Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	AGRASS RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0	ERICA RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0	GLEHE RUBUS WEED - INJURY % 6/29/2011 6WATPOST - 0	RUBUS FRUIT - YIELD GRAMS 6/23/2011 HARV 1 - 0	RUBUS FRUIT - YIELD GRAMS 6/30/2011 HARV 2 - 0	RUBUS FRUIT - YIELD GRAMS 7/7/2011 HARV 3 - 0	RUBUS FRUIT - TOTAL YIELD KG 7/14/2011 H1+H2+H3 - 2
					22	23	24	25	26	27	28
1	UNTREATED CONTROL				0 b	0 b	0 b	433 a	1205 a	1120 a	2.76 a
2	WEED-FREE CONTROL				100 a	100 a	100 a	326 a	1490 a	1146 a	2.96 a
3	CALLISTO	0.094	lb ai/a	A				277 a	935 a	1129 a	2.34 a
4	CALLISTO	0.187	lb ai/a	A				397 a	1433 a	1166 a	2.99 a
5	CASORON	4	lb ai/a	A				291 a	1068 a	1468 a	2.82 a
6	CALLISTO+	0.094	lb ai/a	A	0 b	0 b	0 b	390 a	1275 a	991 a	2.65 a
	CALLISTO+	0.094	lb ai/a	B							
	NIS	0.25	% v/v	B							
LSD (P=.05)					0.0	0.0	0.0	161.4	388.5	448.8	0.676
Standard Deviation					0.0	0.0	0.0	107.1	257.8	297.8	0.449
CV					0.0	0.0	0.0	30.42	20.89	25.46	16.29
Bartlett's X2					0.0	0.0	0.0	1.858	5.24	8.271	6.305
P(Bartlett's X2)					.	.	.	0.868	0.387	0.142	0.278
Replicate F					0.000	0.000	0.000	2.485	1.972	3.837	5.178
Replicate Prob(F)					1.0000	1.0000	1.0000	0.1005	0.1615	0.0320	0.0118
Treatment F					0.000	0.000	0.000	1.399	2.703	1.131	1.142
Treatment Prob(F)					1.0000	1.0000	1.0000	0.2803	0.0619	0.3861	0.3811

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

RASPBERRIES, RED - WEED CONTROL AND CROP TOLERANCE WITH CALLISTO

Trial ID:	RASPREDWCCTCALLW 2011	Study Dir.:	Doug Doohan and T. Koch
Location:	Wooster, Ohio	Investigator:	Dr. Douglas J. Doohan

Weed Code
CARHI = Cardamine hirsuta
ERICA = Conyza canadensis
GLEHE = Glechoma hederacea
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Tim Koch **Title:** Professor; Res. Assoc
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/ The Ohio State University
Postal Code: 44691

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA
Trial Status: ONE-YEAR/INTERIM
Trial Reliability: RELIABLE
Initiation Date: 6/9/2011
Planned Completion Date: 9/1/2011

COOPERATOR/LANDOWNER

Cooperator: Dave Maurer
Org: Maurer Farms
Address 1: 2901 Batdorf Rd
City: Wooster
State/Prov: OH
Postal Code: 44691
Country: USA
Phone No: 2642285

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: Evaluate treatments for effective residual control of late emerging annual grass control in no- till sweet corn.
Conclusions: Fall panicum was the prevalent grass species. Visually, the top three treatments for control of fall panicum at 6 weeks after treatment were:

1) treatment #11: Accent Q @ 0.9 oz/A + MSO@ 2 pt/A + UAN@ 2.5 pt/A (POST)

2) treatment #9: Bicep 11 Magnum @ 1.6 qt/A (PRE), + Laudis@ 3 oz/A + MSO@ 2 pt/A + UAN@ 4pt/A (POST)

3) treatmentt #4: Degree Extra@ 3.3 qt/A (PRE), + Impact @ 0.75 fl. oz/A + MSO@ 2 pt/A + UAN@ 4pt/A (POST)

However, we did take yield records this year on primary ears and found that treatment #9 , Bicep 11 Magnum @ 1.6 qt/a (PRE), + Laudis@ 3 oz/A + MSO@ 2 pt/A + UAN@ 4pt/A (POST) had good grass control and significantly higher total number of ears per plot and higher total yield weight over the untreated control.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	PANDI	**Fa**	ll panicum	Panicum dichotomiflorum
2.	AMACH	**Sm**	ooth pigweed	Amaranthus hybridus
3.	POROL	**Co**	mmon purslane	Portulaca oleracea
4.	CYPES	**Ye**	llow nutsedge	Cyperus esculentus

Crop 1: ZEAMS CORN, SWEET **Variety:** PRIMUS
Planting Date: 6/9/2011 **Planting Method:** NOTILL
Rate: 28000 P/A **Depth:** 1.5 IN
Row Spacing: 30 IN **Spacing Within Row:** 8 IN **Seed Bed:** COARSE/TRASHY
Soil Temperature: 77.4 F **Soil Moisture:** NORMAL **Emergence Date:** 6/23/2011

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: NO-TILL **Study Design:** RACOBL

SOIL DESCRIPTION

% Sand: 16 **% OM:** 1.8 **Texture:** SILT LOAM
% Silt: 72 **pH:** 5.5 **Soil Name:** CANFIELD SILT LOAM
% Clay: 12 **CEC:** 7.2 **Fert. Level:** GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	6/10/2011	7/6/2011
Time of Day:	2:45 PM	9-10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	74.4 F	76.7 F
% Relative Humidity:	64.8	69.9
Wind Velocity, Unit:	1.3 MPH	2.9 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	74.5 F	72.8 F
Soil Moisture:	MOIST	DRY
% Cloud Cover:	20	20

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMS	ZEAMS
Stage Scale:	PRE	POST
Height, Unit:	0 IN	12 IN

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	PANDI PRE	PANDI POST
Stage Scale:	NONE	1-3"
Density, Unit:	NONE PLOT	20 FT2
Weed 2 Code, Stage:	AMACH PRE	AMACH POST
Stage Scale:	NONE	3-6"
Density, Unit:	NONE PLOT	2 FT2
Weed 3 Code, Stage:	POROL PRE	POROL POST
Stage Scale:	NONE	3-8" DIAM
Density, Unit:	NONE PLOT	2 FT2
Weed 4 Code, Stage:	CYPES PRE	CYPES POST
Stage Scale:	NONE	1-3"
Density, Unit:	NONE PLOT	5 FT2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	40	40
Nozzle Type:	TTJET	TTJET
Nozzle Size:	11002VP	11002VP
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	2	2
Band Width, Unit:	36 IN	36 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: A Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	OUTLOOK	6	EC	0.75	lb ai/a	PRE	A	9.999 ml/mx	103	213	303	413
4	GUARDSMAN MAX	5	L	2.5	lb ai/a	PRE	A	40.0 ml/mx	104	214	304	406
5	DEGREE EXTRA	4	L	3.3	lb ai/a	PRE	A	65.99 ml/mx	105	204	308	402
6	DUAL II MAGNUM	7.64	L	1.43	lb ai/a	PRE	A	14.97 ml/mx	106	212	301	410
7	LUMAX	4	L	2.75	lb ai/a	PRE	A	54.99 ml/mx	107	211	307	405
8	BICEP 11 MAGNUM+	5.5	L	2.2	lb ai/a	PRE	A	32.0 ml/mx	108	205	312	401
9	BICEP 11 MAGNUM+	5.5	L	2.2	lb ai/a	PRE	A	32.0 ml/mx	109	202	305	407
10	DEGREE EXTRA+	4	L	3.3	lb ai/a	PRE	A	65.99 ml/mx	110	208	309	404
13	CORVUS	2.63	SC	0.0684	lb ai/a	PRE	A	2.08 ml/mx	113	209	302	409
14	CORVUS	2.63	SC	0.115	lb ai/a	PRE	A	3.498 ml/mx	114	201	313	403

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
8	IMPACT+	2.8	SC	0.0164	lb ai/a	POST<2"G	B	0.4685 ml/mx	108	205	312	401
	MSO+	0	SL	1	% v/v	POST<2"G	B	20.0 ml/mx				
	UAN 28%	0	SL	2	% v/v	POST<2"G	B	40.0 ml/mx				
9	LAUDIS+	3.5	SL	0.082	lb ai/a	POST<2"G	B	1.874 ml/mx	109	202	305	407
	MSO+	0	SL	1	% v/v	POST<2"G	B	20.0 ml/mx				
	UAN 28%	0	SL	2	% v/v	POST<2"G	B	40.0 ml/mx				
10	IMPACT+	2.8	SC	0.0164	lb ai/a	POST<2"G	B	0.4685 ml/mx	110	208	309	404
	MSO+	0	SL	1	% v/v	POST<2"G	B	20.0 ml/mx				
	UAN 28%	0	SL	2	% v/v	POST<2"G	B	40.0 ml/mx				
11	ACCENT Q	54.4	DF	0.0306	lb ai/a	POST<2"G	B	0.5392 g/mx	111	210	306	412
	MSO+	0	SL	1	% v/v	POST<2"G	B	20.0 ml/mx				
	UAN 28%	0	SL	1.25	% v/v	POST<2"G	B	25.0 ml/mx				
12	IMPACT+	2.8	SC	0.0164	lb ai/a	POST<2"G	B	0.4685 ml/mx	112	203	310	414
	ATRAZINE+	4	L	0.5	lb ai/a	POST<2"G	B	9.999 ml/mx				
	MSO+	0	SL	1	% v/v	POST<2"G	B	20.0 ml/mx				
	UAN 28%	0	SL	2.5	% v/v	POST<2"G	B	49.99 ml/mx				

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min 1.1949)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL								101	206	311	408
2	WEED-FREE CONTROL								102	207	314	411

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
12.499	ml	OUTLOOK	6	EC	
49.995	ml	GUARDSMAN MAX	5	L	
82.491	ml	DEGREE EXTRA	4	L	
18.715	ml	DUAL II MAGNUM	7.64	L	
68.743	ml	LUMAX	4	L	
79.991	ml	BICEP 11 MAGNUM+	5.5	L	
1.757	ml	IMPACT+	2.8	SC	
124.986	ml	MSO+	0	SL	
243.723	ml	UAN 28%	0	SL	
2.343	ml	LAUDIS+	3.5	SL	
82.491	ml	DEGREE EXTRA+	4	L	
0.674	g	ACCENT Q	54.4	DF	
12.499	ml	ATRAZINE+	4	L	
6.973	ml	CORVUS	2.63	SC	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Rep	Blk																		
4	4	401	8	402	5	403	14	404	10	405	7	406	4	407	9	408	1	409	13	410	6
3	3	301	6	302	13	303	3	304	4	305	9	306	11	307	7	308	5	309	10	310	12
2	2	201	14	202	9	203	12	204	5	205	8	206	1	207	2	208	10	209	13	210	11
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8	109	9	110	10

Rep	Blk								
4	4	411	2	412	11	413	3	414	12
3	3	311	1	312	8	313	14	314	2
2	2	211	7	212	6	213	3	214	4
1	1	111	11	112	12	113	13	114	14

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS
	Crop Code															
	Part Rated					PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED	WEED
	Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/24/2011	6/24/2011	6/24/2011	6/24/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/22/2011	7/22/2011	7/22/2011
	Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	7WATPRE	7WATPRE	7WATPRE
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0	0
					206	0	0	0	0	0	0	0	0	0	0	0
					311	0	0	0	0	0	0	0	0	0	0	0
					408	0	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	0	100	100	100	0	100	100	100	0	100	100
					207	0	100	100	100	0	100	100	100	0	100	100
					314	0	100	100	100	0	100	100	100	0	100	100
					411	0	100	100	100	0	100	100	100	0	100	100
					Mean =	0	100	100	100	0	100	100	100	0	100	100
3	OUTLOOK	0.75	lb ai/a	A	103	0	99	99	80	0	85	75	75	0	50	50
					213	0	99	99	90	0	80	75	75	0	40	50
					303	0	99	99	99	0	80	70	50	0	40	50
					413	0	99	99	99	0	80	80	99	0	30	40
					Mean =	0	99	99	92	0	81	75	75	0	40	48
4	GUARDSMAN MAX	2.5	lb ai/a	A	104	0	99	99	99	0	90	70	95	0	50	80
					214	0	99	99	99	0	85	99	99	0	0	99
					304	0	90	90	90	0	75	99	99	0	80	99
					406	0	99	99	99	0	85	99	99	0	75	90
					Mean =	0	97	97	97	0	84	92	98	0	51	92
5	DEGREE EXTRA	3.3	lb ai/a	A	105	0	99	99	99	0	85	99	99	0	70	99
					204	0	99	99	99	0	85	85	99	0	85	90
					308	0	99	99	99	0	90	99	99	0	85	99
					402	0	90	90	90	0	80	99	99	0	50	99
					Mean =	0	97	97	97	0	85	96	99	0	73	97
6	DUAL II MAGNUM	1.43	lb ai/a	A	106	0	99	99	99	0	75	80	80	0	60	99
					212	0	99	99	99	0	80	99	99	0	0	99
					301	0	99	99	99	0	70	99	99	0	50	99
					410	0	99	99	99	0	80	0	99	0	70	70
					Mean =	0	99	99	99	0	76	70	94	0	45	92

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS
	Crop Code															
	Part Rated					PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED	WEED
	Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/24/2011	6/24/2011	6/24/2011	6/24/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/22/2011	7/22/2011	7/22/2011
	Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	7WATPRE	7WATPRE	7WATPRE
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
7	LUMAX	2.75	lb ai/a	A	107	0	99	99	99	0	75	99	99	0	60	99
					211	0	99	99	99	0	80	99	99	0	0	99
					307	0	99	99	99	0	80	99	99	0	40	99
					405	0	99	99	99	0	99	99	99	0	95	99
					Mean =	0	99	99	99	0	84	99	99	0	49	99
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	108	0	99	99	99	0	80	99	99	0	70	99
	IMPACT+	0.0164	lb ai/a	B	205	0	99	99	99	0	95	95	99	0	85	85
	MSO+	1	% v/v	B	312	0	99	99	99	0	85	99	99	0	80	99
	UAN 28%	2	% v/v	B	401	0	99	99	99	0	99	99	99	0	75	99
					Mean =	0	99	99	99	0	90	98	99	0	78	96
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	109	0	99	99	99	0	90	98	90	0	80	99
	LAUDIS+	0.082	lb ai/a	B	202	0	99	99	99	0	85	80	99	0	70	70
	MSO+	1	% v/v	B	305	0	99	99	99	0	85	99	99	0	80	99
	UAN 28%	2	% v/v	B	407	0	99	99	99	0	70	80	99	0	60	70
					Mean =	0	99	99	99	0	83	89	97	0	73	85
10	DEGREE EXTRA+	3.3	lb ai/a	A	110	0	99	99	99	0	95	99	99	0	90	99
	IMPACT+	0.0164	lb ai/a	B	208	0	99	99	99	0	80	99	99	0	70	99
	MSO+	1	% v/v	B	309	0	99	99	99	0	98	99	98	0	90	99
	UAN 28%	2	% v/v	B	404	0	99	99	99	0	75	99	99	0	70	99
					Mean =	0	99	99	99	0	87	99	99	0	80	99
11	ACCENT Q	0.0306	lb ai/a	B	111											
	MSO+	1	% v/v	B	210											
	UAN 28%	1.25	% v/v	B	306											
					412											
					Mean =	.	.	.	.	.	.	.	.	.	.	.
12	IMPACT+	0.0164	lb ai/a	B	112											
	ATRAZINE+	0.5	lb ai/a	B	203											
	MSO+	1	% v/v	B	310											
	UAN 28%	2.5	% v/v	B	414											
					Mean =	.	.	.	.	.	.	.	.	.	.	.

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8	9	10	11
	Weed Code					ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS
	Crop Code															
	Part Rated					PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED	WEED
	Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%	%
	Rating Date					6/24/2011	6/24/2011	6/24/2011	6/24/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/22/2011	7/22/2011	7/22/2011
	Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	7WATPRE	7WATPRE	7WATPRE
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
13	CORVUS	0.0684	lb ai/a	A	113	0	80	99	99	0	95	99	99	0	70	99
					209	10	99	99	99	20	95	99	95	0	85	85
					302	10	99	99	99	0	30	95	99	0	85	99
					409	0	99	99	99	15	99	99	99	0	65	99
					Mean =	5	94	99	99	9	80	98	98	0	76	96
14	CORVUS	0.115	lb ai/a	A	114	5	90	99	99	15	95	99	99	0	85	99
					201	0	99	99	99	20	99	99	99	0	95	99
					313	0	99	99	99	10	99	99	99	0	85	99
					403	0	99	99	99	0	99	99	99	0	85	99
					Mean =	1	97	99	99	11	98	99	99	0	88	99

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Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21
	Weed Code					POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	ZEAMS	ZEAMS	PANDI	AMACH
	Crop Code					ZEAMS			ZEAMS	ZEAMS	ZEAMS			ZEAMS	ZEAMS
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Data Type					CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	STUNT	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					7/22/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
	Trt-Eval Interval					7WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0	0	0
					206	0	0	0	0	0	0	0	0	0	0
					311	0	0	0	0	0	0	0	0	0	0
					408	0	0	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0	0	0
2	WEED-FREE CONTROL				102	100	0	0	100	100	100	0	0	100	100
					207	100	0	0	100	100	100	0	0	100	100
					314	100	0	0	100	100	100	0	0	100	100
					411	100	0	0	100	100	100	0	0	100	100
					Mean =	100	0	0	100	100	100	0	0	100	100
3	OUTLOOK	0.75	lb ai/a	A	103	50									
					213	50									
					303	99									
					413	99									
					Mean =	75	.	.	.	.	.	.	.	.	.
4	GUARDSMAN MAX	2.5	lb ai/a	A	104	99									
					214	99									
					304	99									
					406	90									
					Mean =	97	.	.	.	.	.	.	.	.	.
5	DEGREE EXTRA	3.3	lb ai/a	A	105	99									
					204	99									
					308	99									
					402	99									
					Mean =	99	.	.	.	.	.	.	.	.	.
6	DUAL II MAGNUM	1.43	lb ai/a	A	106	0									
					212	99									
					301	99									
					410	99									
					Mean =	74	.	.	.	.	.	.	.	.	.

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21
	Weed Code					POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	ZEAMS	ZEAMS	PANDI	AMACH
	Crop Code					ZEAMS			ZEAMS	ZEAMS	ZEAMS			ZEAMS	ZEAMS
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Data Type					CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	STUNT	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					7/22/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
	Trt-Eval Interval					7WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
7	LUMAX	2.75	lb ai/a	A	107	99									
					211	99									
					307	99									
					405	99									
					Mean =	99	.	.	.	.	.	.	.	.	.
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	108	99	0	0	95	99	99	0	0	95	99
	IMPACT+	0.0164	lb ai/a	B	205	90	0	0	99	99	99	0	0	97	99
	MSO+	1	% v/v	B	312	99	0	0	95	99	99	0	0	95	99
	UAN 28%	2	% v/v	B	401	99	20	10	30	99	99	5	5	80	99
					Mean =	97	5	3	80	99	99	1	1	92	99
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	109	99	0	0	95	99	95	0	0	55	99
	LAUDIS+	0.082	lb ai/a	B	202	99	0	0	90	90	99	0	0	90	95
	MSO+	1	% v/v	B	305	99	0	0	90	99	99	0	0	90	99
	UAN 28%	2	% v/v	B	407	99	0	0	75	99	99	0	0	70	99
					Mean =	99	0	0	88	97	98	0	0	76	98
10	DEGREE EXTRA+	3.3	lb ai/a	A	110	99	0	0	99	99	99	0	0	95	99
	IMPACT+	0.0164	lb ai/a	B	208	99	5	5	85	99	99	0	0	90	99
	MSO+	1	% v/v	B	309	99	0	0	95	99	99	0	0	90	99
	UAN 28%	2	% v/v	B	404	99	0	0	60	99	99	5	5	90	99
					Mean =	99	1	1	85	99	99	1	1	91	99
11	ACCENT Q	0.0306	lb ai/a	B	111		10	5	50	20	80	5	5	90	90
	MSO+	1	% v/v	B	210		20	10	55	99	95	5	5	90	99
	UAN 28%	1.25	% v/v	B	306		10	5	90	99	65	0	0	95	99
					412		15	10	90	90	90	5	5	98	95
					Mean =	.	14	8	71	77	83	4	4	93	96
12	IMPACT+	0.0164	lb ai/a	B	112		10	5	40	99	80	15	15	85	40
	ATRAZINE+	0.5	lb ai/a	B	203		0	0	60	80	80	0	0	95	99
	MSO+	1	% v/v	B	310		5	5	90	95	99	0	0	85	80
	UAN 28%	2.5	% v/v	B	414		0	0	85	99	99	0	0	90	99
					Mean =	.	4	3	69	93	90	4	4	89	80

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Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	12	13	14	15	16	17	18	19	20	21
	Weed Code					POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	ZEAMS	ZEAMS	PANDI	AMACH
	Crop Code					ZEAMS			ZEAMS	ZEAMS	ZEAMS			ZEAMS	ZEAMS
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Data Type					CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	STUNT	INJURY	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%	%	%
	Rating Date					7/22/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
	Trt-Eval Interval					7WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	ARM Action Codes					P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
13	CORVUS	0.0684	lb ai/a	A	113	99									
					209	85									
					302	99									
					409	99									
					Mean =	96	.	.	.	.	.	.	.	.	.
14	CORVUS	0.115	lb ai/a	A	114	99									
					201	99									
					313	99									
					403	99									
					Mean =	99	.	.	.	.	.	.	.	.	.

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Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28	29	30	31
	Weed Code					POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	CYPES	ZEAMS	ZEAMS	ZEAMS
	Crop Code					ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	PRIMAR -	EAR -	EAR -
	Rating Data Type					CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	EARS/PLOT	TOTAL WT	AVE WT
	Rating Unit					%	%	%	%	%	%	%	TOTAL NO	KG	KG
	Rating Date					7/27/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/24/2011	8/24/2011	8/24/2011
	Trt-Eval Interval					3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	YIELD	YIELD	YIELD
	ARM Action Codes					P	P	P	P	P	P	P			
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2	- 2
1	UNTREATED CONTROL				101	0	0	0	0	0	0	0	20	3.95	0.20
					206	0	0	0	0	0	0	0	62	20.21	0.33
					311	0	0	0	0	0	0	0	62	22.39	0.36
					408	0	0	0	0	0	0	0	51	15.70	0.31
					Mean =	0	0	0	0	0	0	0	49	15.56	0.30
2	WEED-FREE CONTROL				102	100	0	0	100	100	100	100	67	22.80	0.34
					207	100	0	0	100	100	100	100	51	16.09	0.32
					314	100	0	0	100	100	100	100	56	15.22	0.27
					411	100	0	0	100	100	100	100	50	23.77	0.48
					Mean =	100	0	0	100	100	100	100	56	19.47	0.35
3	OUTLOOK	0.75	lb ai/a	A	103								39	6.77	0.17
					213								9	2.27	0.25
					303								57	17.07	0.30
					413								51	20.85	0.41
					Mean =	.	.	.	.	.	.	.	39	11.74	0.28
4	GUARDSMAN MAX	2.5	lb ai/a	A	104								51	16.60	0.33
					214								61	20.76	0.34
					304								52	15.06	0.29
					406								60	24.56	0.41
					Mean =	.	.	.	.	.	.	.	56	19.25	0.34
5	DEGREE EXTRA	3.3	lb ai/a	A	105								73	27.08	0.37
					204								72	21.09	0.29
					308								72	15.54	0.22
					402								64	21.70	0.34
					Mean =	.	.	.	.	.	.	.	70	21.35	0.30
6	DUAL II MAGNUM	1.43	lb ai/a	A	106								55	19.68	0.35
					212								59	20.41	0.35
					301								50	14.62	0.29
					410								51	24.19	0.47
					Mean =	.	.	.	.	.	.	.	54	19.73	0.37

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Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28	29	30	31
	Weed Code					POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	CYPES	ZEAMS	ZEAMS	ZEAMS
	Crop Code					ZEAMS	PLANT -	PLANT -	ZEAMS	ZEAMS	ZEAMS	ZEAMS	PRIMAR -	EAR -	EAR -
	Part Rated					WEED -	STUNT	INJURY	WEED -	WEED -	WEED -	WEED -	EARS/PLOT	TOTAL WT	AVE WT
	Rating Data Type					CONTROL	%	%	CONTROL	CONTROL	CONTROL	CONTROL	TOTAL NO	KG	KG
	Rating Unit					%	8/17/2011	8/17/2011	%	%	%	%	8/24/2011	8/24/2011	8/24/2011
	Rating Date					7/27/2011	6WATPOST	6WATPOST	8/17/2011	8/17/2011	8/17/2011	8/17/2011	YIELD	YIELD	YIELD
	Trt-Eval Interval					3WATPOST	P	P	6WATPOST	6WATPOST	6WATPOST	6WATPOST			
	ARM Action Codes					P	- 0	- 0	P	P	P	P	- 0	- 2	- 2
	# Subsamples, Dec.					- 0			- 0	- 0	- 0	- 0			
7	LUMAX	2.75	lb ai/a	A	107								34	8.63	0.25
					211								52	19.90	0.38
					307								60	13.47	0.22
					405								75	32.19	0.43
					Mean =	.	.	.	.	.	.	.	55	18.55	0.32
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	108	99	0	0	85	99	99	0	74	24.64	0.33
	IMPACT+	0.0164	lb ai/a	B	205	99	0	0	95	99	99	99	68	26.93	0.40
	MSO+	1	% v/v	B	312	99	0	0	95	99	99	99	71	25.89	0.36
	UAN 28%	2	% v/v	B	401	99	0	0	80	99	99	99	41	13.42	0.33
					Mean =	99	0	0	89	99	99	74	64	22.72	0.35
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	109	99	0	0	70	99	99	99	65	22.76	0.35
	LAUDIS+	0.082	lb ai/a	B	202	99	0	0	75	99	99	99	73	25.62	0.35
	MSO+	1	% v/v	B	305	99	0	0	85	99	99	80	80	28.26	0.35
	UAN 28%	2	% v/v	B	407	99	0	0	65	99	99	99	72	30.79	0.43
					Mean =	99	0	0	74	99	99	94	73	26.86	0.37
10	DEGREE EXTRA+	3.3	lb ai/a	A	110	99	0	0	90	99	99	50	70	25.12	0.36
	IMPACT+	0.0164	lb ai/a	B	208	99	0	0	80	99	99	99	64	24.18	0.38
	MSO+	1	% v/v	B	309	99	0	0	90	99	99	99	56	14.64	0.26
	UAN 28%	2	% v/v	B	404	99	0	0	80	99	99	99	67	26.27	0.39
					Mean =	99	0	0	85	99	99	87	64	22.55	0.35
11	ACCENT Q	0.0306	lb ai/a	B	111	99	0	0	99	99	99	40	61	17.34	0.28
	MSO+	1	% v/v	B	210	99	0	0	90	99	99	99	70	23.01	0.76
	UAN 28%	1.25	% v/v	B	306	90	0	0	95	99	95	85	69	15.34	0.22
					412	99	0	0	99	99	99	99	48	11.62	0.24
					Mean =	97	0	0	96	99	98	81	62	16.83	0.38
12	IMPACT+	0.0164	lb ai/a	B	112	99	0	0	75	99	0	99	67	23.63	0.35
	ATRAZINE+	0.5	lb ai/a	B	203	80	0	0	90	99	99	85	67	23.04	0.34
	MSO+	1	% v/v	B	310	99	0	0	75	70	99	0	57	24.09	0.42
	UAN 28%	2.5	% v/v	B	414	99	0	0	90	99	99	99	30	10.15	0.34
					Mean =	94	0	0	83	92	74	71	55	20.23	0.36

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28	29	30	31
	Weed Code					POROL			PANDI	AMACH	POROL	CYPES			
	Crop Code					ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	PRIMAR -	EAR -	EAR -
	Rating Data Type					CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	EARS/PLOT	TOTAL WT	AVE WT
	Rating Unit					%	%	%	%	%	%	%	TOTAL NO	KG	KG
	Rating Date					7/27/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/24/2011	8/24/2011	8/24/2011
	Trt-Eval Interval					3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	YIELD	YIELD	YIELD
	ARM Action Codes					P	P	P	P	P	P	P			
	# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2	- 2
13	CORVUS	0.0684	lb ai/a	A	113								52	16.25	0.31
					209								61	21.50	0.35
					302								68	24.31	0.36
					409								51	22.56	0.44
					Mean =	.	.	.	.	.	.	.	58	21.16	0.37
14	CORVUS	0.115	lb ai/a	A	114								61	23.21	0.38
					201								65	21.36	0.33
					313								24	10.44	0.44
					403								64	26.91	0.42
					Mean =	.	.	.	.	.	.	.	54	20.48	0.39

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
PANDI = Panicum dichotomiflorum
AMACH = Amaranthus hybridus
POROL = Portulaca oleracea
CYPES = Cyperus esculentus
Crop Code
ZEAMS = CORN, SWEET / ZEA MAYS L. CONVAR. SACCHARATA KOERN.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM
ARM Action Codes
P = Rating scale of 0 to 100 (e.g. % control or injury)

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
	Weed Code				ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS
	Crop Code														
	Part Rated				PLANT	WEED	WEED	WEED	PLANT	WEED	WEED	WEED	PLANT	WEED	WEED
	Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%	%
	Rating Date				6/24/2011	6/24/2011	6/24/2011	6/24/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/22/2011	7/22/2011	7/22/2011
	Trt-Eval Interval				2WATPRE	2WATPRE	2WATPRE	2WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	7WATPRE	7WATPRE	7WATPRE
	ARM Action Codes				P	P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL			A	0 b	0 b	0 b	0 b	0 b	0 b	0 b	0 c	0 a	0 d	0 c
2	WEED-FREE CONTROL			A	0 b	100 a	100 a	100 a	0 b	100 a	100 a	100 a	0 a	100 a	100 a
3	OUTLOOK	0.75	lb ai/a	A	0 b	99 a	99 a	92 a	0 b	81 a	75 a	75 b	0 a	40 c	48 b
4	GUARDSMAN MAX	2.5	lb ai/a	A	0 b	97 a	97 a	97 a	0 b	84 a	92 a	98 a	0 a	51 bc	92 a
5	DEGREE EXTRA	3.3	lb ai/a	A	0 b	97 a	97 a	97 a	0 b	85 a	96 a	99 a	0 a	73 abc	97 a
6	DUAL II MAGNUM	1.43	lb ai/a	A	0 b	99 a	99 a	99 a	0 b	76 a	70 a	94 a	0 a	45 bc	92 a
7	LUMAX	2.75	lb ai/a	A	0 b	99 a	99 a	99 a	0 b	84 a	99 a	99 a	0 a	49 bc	99 a
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	0 b	99 a	99 a	99 a	0 b	90 a	98 a	99 a	0 a	78 abc	96 a
	IMPACT+	0.0164	lb ai/a	B											
	MSO+	1	% v/v	B											
	UAN 28%	2	% v/v	B											
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	0 b	99 a	99 a	99 a	0 b	83 a	89 a	97 a	0 a	73 abc	85 a
	LAUDIS+	0.082	lb ai/a	B											
	MSO+	1	% v/v	B											
	UAN 28%	2	% v/v	B											
10	DEGREE EXTRA+	3.3	lb ai/a	A	0 b	99 a	99 a	99 a	0 b	87 a	99 a	99 a	0 a	80 abc	99 a
	IMPACT+	0.0164	lb ai/a	B											
	MSO+	1	% v/v	B											
	UAN 28%	2	% v/v	B											
11	ACCENT Q	0.0306	lb ai/a	B											
	MSO+	1	% v/v	B											
	UAN 28%	1.25	% v/v	B											
12	IMPACT+	0.0164	lb ai/a	B											
	ATRAZINE+	0.5	lb ai/a	B											
	MSO+	1	% v/v	B											
	UAN 28%	2.5	% v/v	B											
13	CORVUS	0.0684	lb ai/a	A	5 a	94 a	99 a	99 a	9 ab	80 a	98 a	98 a	0 a	76 abc	96 a

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The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code					ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS	POROL ZEAMS	ZEAMS	PANDI ZEAMS	AMACH ZEAMS
Crop Code					ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated					PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -	WEED -	PLANT -	WEED -	WEED -
Rating Data Type					INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%	%	%	%
Rating Date					6/24/2011	6/24/2011	6/24/2011	6/24/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/22/2011	7/22/2011	7/22/2011
Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	4WATPRE	4WATPRE	4WATPRE	4WATPRE	7WATPRE	7WATPRE	7WATPRE
ARM Action Codes					P	P	P	P	P	P	P	P	P	P	P
# Subsamples, Dec.					- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8	9	10	11
14	CORVUS	0.115	lb ai/a	A	1 b	97 a	99 a	99 a	11 a	98 a	99 a	99 a	0 a	88 ab	99 a
LSD (P=.05)					2.7	5.1	2.7	4.8	5.6	16.7	21.6	9.4	0.0	27.7	10.7
Standard Deviation					1.9	3.6	1.9	3.3	3.9	11.6	15.0	6.5	0.0	19.2	7.4
CV					355.32	3.96	2.06	3.68	231.6	14.66	17.71	7.39	0.0	30.65	8.88
Bartlett's X2					1.872	2.904	0.0	2.073	0.104	34.99	40.447	34.039	0.0	25.246	8.51
P(Bartlett's X2)					0.171	0.407	.	0.355	0.747	0.001*	0.001*	0.001*	.	0.003*	0.203
Replicate F					0.558	0.914	0.647	0.190	1.025	0.830	0.720	1.268	0.000	1.544	2.072
Replicate Prob(F)					0.6467	0.4448	0.5904	0.9022	0.3940	0.4869	0.5473	0.3014	1.0000	0.2215	0.1228
Treatment F					2.475	253.644	934.547	294.376	4.144	19.907	14.427	77.176	0.000	7.887	65.515
Treatment Prob(F)					0.0218	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21
	Weed Code				POROL			PANDI	AMACH	POROL			PANDI	AMACH
	Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
	Part Rated				WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Data Type				CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	STUNT	INJURY	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%	%	%
	Rating Date				7/22/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
	Trt-Eval Interval				7WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	ARM Action Codes				P	P	P	P	P	P	P	P	P	P
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
1	UNTREATED CONTROL				0 b	0 b	0 b	0 b	0 b	0 c	0 a	0 a	0 c	0 b
2	WEED-FREE CONTROL				100 a	0 b	0 b	100 a	100 a	100 a	0 a	0 a	100 a	100 a
3	OUTLOOK	0.75	lb ai/a	A	75 a									
4	GUARDSMAN MAX	2.5	lb ai/a	A	97 a									
5	DEGREE EXTRA	3.3	lb ai/a	A	99 a									
6	DUAL II MAGNUM	1.43	lb ai/a	A	74 a									
7	LUMAX	2.75	lb ai/a	A	99 a									
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	97 a	5 b	3 b	80 a	99 a	99 a	1 a	1 a	92 a	99 a
	IMPACT+	0.0164	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	99 a	0 b	0 b	88 a	97 a	98 a	0 a	0 a	76 b	98 a
	LAUDIS+	0.082	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
10	DEGREE EXTRA+	3.3	lb ai/a	A	99 a	1 b	1 b	85 a	99 a	99 a	1 a	1 a	91 a	99 a
	IMPACT+	0.0164	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
11	ACCENT Q	0.0306	lb ai/a	B		14 a	8 a	71 a	77 a	83 b	4 a	4 a	93 a	96 a
	MSO+	1	% v/v	B										
	UAN 28%	1.25	% v/v	B										
12	IMPACT+	0.0164	lb ai/a	B		4 b	3 b	69 a	93 a	90 ab	4 a	4 a	89 a	80 a
	ATRAZINE+	0.5	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2.5	% v/v	B										
13	CORVUS	0.0684	lb ai/a	A	96 a									

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code				POROL			PANDI	AMACH	POROL			PANDI	AMACH
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
Rating Data Type				CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	STUNT	INJURY	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%	%	%
Rating Date				7/22/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
Trt-Eval Interval				7WATPRE	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
ARM Action Codes				P	P	P	P	P	P	P	P	P	P
# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	12	13	14	15	16	17	18	19	20	21
14	CORVUS	0.115	lb ai/a	A	99 a									
LSD (P=.05)					23.6	7.2	4.1	28.1	22.7	10.0	4.8	4.8	11.1	15.6
Standard Deviation					16.4	4.9	2.7	18.9	15.3	6.7	3.2	3.2	7.5	10.5
CV					19.03	143.22	138.87	26.87	18.9	8.27	227.0	227.0	9.7	12.9
Bartlett's X2					23.479	5.393	1.867	4.534	11.961	7.249	6.401	6.401	12.591	17.042
P(Bartlett's X2)					0.001*	0.145	0.601	0.339	0.003*	0.027*	0.094	0.094	0.013*	0.001*
Replicate F					1.456	0.441	0.440	1.002	0.721	0.650	1.132	1.132	1.056	1.187
Replicate Prob(F)					0.2443	0.7264	0.7272	0.4147	0.5525	0.5934	0.3626	0.3626	0.3921	0.3426
Treatment F					12.244	4.210	3.880	11.999	22.874	117.490	1.075	1.075	86.362	48.619
Treatment Prob(F)					0.0001	0.0081	0.0116	0.0001	0.0001	0.0001	0.4130	0.4130	0.0001	0.0001

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The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	22	23	24	25	26	27	28	29	30	31
	Weed Code				POROL	ZEAMS	ZEAMS	PANDI	AMACH	POROL	CYPES	ZEAMS	ZEAMS	ZEAMS
	Crop Code				ZEAMS	PLANT -	PLANT -	ZEAMS	ZEAMS	ZEAMS	ZEAMS	PRIMAR -	EAR -	EAR -
	Part Rated				WEED -	STUNT	INJURY	WEED -	WEED -	WEED -	WEED -	EARS/PLOT	TOTAL WT	AVE WT
	Rating Data Type				CONTROL			CONTROL	CONTROL	CONTROL	CONTROL			
	Rating Unit				%	%	%	%	%	%	%	TOTAL NO	KG	KG
	Rating Date				7/27/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/24/2011	8/24/2011	8/24/2011
	Trt-Eval Interval				3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	YIELD	YIELD	YIELD
	ARM Action Codes				P	P	P	P	P	P	P			
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2	- 2
1	UNTREATED CONTROL				0 b	0 a	0 a	0 e	0 b	0 b	0 b	49 a	15.56 a	0.30 a
2	WEED-FREE CONTROL				100 a	0 a	0 a	100 a	100 a	100 a	100 a	56 a	19.47 a	0.35 a
3	OUTLOOK	0.75	lb ai/a	A								39 a	11.74 a	0.28 a
4	GUARDSMAN MAX	2.5	lb ai/a	A								56 a	19.25 a	0.34 a
5	DEGREE EXTRA	3.3	lb ai/a	A								70 a	21.35 a	0.30 a
6	DUAL II MAGNUM	1.43	lb ai/a	A								54 a	19.73 a	0.37 a
7	LUMAX	2.75	lb ai/a	A								55 a	18.55 a	0.32 a
8	BICEP 11 MAGNUM+	2.2	lb ai/a	A	99 a	0 a	0 a	89 abc	99 a	99 a	74 a	64 a	22.72 a	0.35 a
	IMPACT+	0.0164	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
9	BICEP 11 MAGNUM+	2.2	lb ai/a	A	99 a	0 a	0 a	74 d	99 a	99 a	94 a	73 a	26.86 a	0.37 a
	LAUDIS+	0.082	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
10	DEGREE EXTRA+	3.3	lb ai/a	A	99 a	0 a	0 a	85 bcd	99 a	99 a	87 a	64 a	22.55 a	0.35 a
	IMPACT+	0.0164	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2	% v/v	B										
11	ACCENT Q	0.0306	lb ai/a	B	97 a	0 a	0 a	96 ab	99 a	98 a	81 a	62 a	16.83 a	0.38 a
	MSO+	1	% v/v	B										
	UAN 28%	1.25	% v/v	B										
12	IMPACT+	0.0164	lb ai/a	B	94 a	0 a	0 a	83 cd	92 a	74 a	71 a	55 a	20.23 a	0.36 a
	ATRAZINE+	0.5	lb ai/a	B										
	MSO+	1	% v/v	B										
	UAN 28%	2.5	% v/v	B										
13	CORVUS	0.0684	lb ai/a	A								58 a	21.16 a	0.37 a

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	22	23	24	25	26	27	28	29	30	31
	Weed Code				POROL			PANDI	AMACH	POROL	CYPES			
	Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
	Part Rated				WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	PRIMAR -	EAR -	EAR -
	Rating Data Type				CONTROL	STUNT	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	EARS/PLOT	TOTAL WT	AVE WT
	Rating Unit				%	%	%	%	%	%	%	TOTAL NO	KG	KG
	Rating Date				7/27/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/17/2011	8/24/2011	8/24/2011	8/24/2011
	Trt-Eval Interval				3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	YIELD	YIELD	YIELD
	ARM Action Codes				P	P	P	P	P	P	P			
	# Subsamples, Dec.				- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 0	- 2	- 2
14	CORVUS	0.115	lb ai/a	A								54 a	20.48 a	0.39 a
	LSD (P=.05)				6.0	0.0	0.0	9.3	8.1	27.9	42.0	19.3	8.809	0.127
	Standard Deviation				4.1	0.0	0.0	6.3	5.5	18.8	28.3	13.5	6.164	0.089
	CV				4.83	0.0	0.0	8.36	6.53	23.08	39.05	23.37	31.22	25.67
	Bartlett's X2				1.521	0.0	0.0	1.81	0.0	14.926	7.267	22.061	8.629	26.558
	P(Bartlett's X2)				0.217	.	.	0.771	.	0.001*	0.122	0.054	0.80	0.014*
	Replicate F				0.711	0.000	0.000	0.489	1.000	0.969	1.747	0.367	1.017	2.690
	Replicate Prob(F)				0.5577	1.0000	1.0000	0.6942	0.4155	0.4291	0.1933	0.7775	0.3955	0.0595
	Treatment F				334.244	0.000	0.000	118.868	183.605	15.575	5.642	1.610	1.332	0.523
	Treatment Prob(F)				0.0001	1.0000	1.0000	0.0001	0.0001	0.0001	0.0019	0.1240	0.2368	0.8959

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SCORNAGRASSCW 2011 Study Dir.: Doug Doohan and Tim Koch
Location: Wooster, Ohio Investigator: Dr. Douglas J. Doohan

Weed Code
PANDI = Panicum dichotomiflorum
AMACH = Amaranthus hybridus
POROL = Portulaca oleracea
CYPES = Cyperus esculentus
Crop Code
ZEAMS = CORN, SWEET / ZEA MAYS L. CONVAR. SACCHARATA KOERN.
Part Rated
PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)
Rating Unit
% = PERCENT
KG = KILOGRAM
ARM Action Codes
P = Rating scale of 0 to 100 (e.g. % control or injury)

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

General Trial Information

Study Director: Doug Doohan **Title:** Professor; Research Associate
Investigator: Dr. Douglas J. Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: M multi-year/interim **Trial Reliability:** RELIABLE
Initiation Date: 5/24/2011 **Planned Completion Date:** 10/30/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:

The objectives are twofold:

1) Efficacy of 2 aminocycolpyr products at 2 rates each

2) Crop safety of aminocyclopyr products

The "**crop**" is pasture grasses, consisting of roughstalk bluegrass, tall fescue, timothy, and velvetgrass.

The "**target weed**" is tall ironweed; we had good pressure throughout the trial.

Crop Injury and weed control were assessed visually. The 0-100 linear scale was used , in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

Conclusions:

Conclusions;
The results indicate that the **best overall treatment was treatment, #3 (** MAT 28 at 4 oz ai/a +2,4-D AMINE at 16 oz/A). It had the best tall ironweed control from 30-90 days after treatment, **and the least injury to the pasture grass species**.

The **two RDQ treatments,(especially the high rate) appeared to injure the pasture grass species**, tall fescue(from 30-90DAT) and timothy, (30-60DAT).

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TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Personnel

Study Director: Doug Doohan **Title:** Professor; Research Associate
Affiliation: OARDC/The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023
Investigator: Dr. Douglas J. Doohan **Title:** Professor
Affiliation: OARDC/The Ohio State University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023593 **Mobile No.:** 330-466-4023

Cooperator/Landowner

Cooperator: Lynn Ault **Role:** Farm Manager
Organization: OARDC **Org. Type:** Research
Address 1: Schaffter Farm
Phone No.: 3302623178
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-2440
Postal Code: 44691 **E-mail:** ault.2@osu.e4du
Country: USA United States

Crop Description

Crop 1: YNIGF Grassland not used in agric. Grassland not used in agric.
Variety: VARIOUS SPECIES **Description:** 2-3' tall
Seed Bed: COMPAC compacted

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Description

Pest 1 Type: O **Code:** FESAR Festuca arundinacea
Common Name: Tall fescue
Description: in bloom, 2-3' tall

Pest 2 Type: W **Code:** GLEHE Glechoma hederacea
Common Name: Ground ivy
Description: 4-6" in bloom

Pest 3 Type: O **Code:** PHLPR Phleum pratense
Common Name: Timothy

Pest 4 Type: O **Code:** POATR Poa trivialis
Common Name: Rough-stalk bluegrass
Description: in bloom, 2-3' tall

Pest 5 Type: W **Code:** SOOCA Solidago canadensis
Common Name: Canadian goldenrod
Description: 14-18" tall

Pest 6 Type: W **Code:** VENAL Vernonia altissima
Common Name: Tall ironweed
Description: less than 12" tall

Pest 7 Type: W **Code:** CYPES Cyperus esculentus
Common Name: Yellow nutsedge

Pest 8 Type: O **Code:** HOLLA Holcus lanatus
Common Name: Common velvet grass

Pest 9 Type: W **Code:** ASTPI Symphyotrichum pilosum
Common Name: White heath aster

Site and Design

Plot Width, Unit: 5 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT PLOT plot
Plot Area, Unit: 125 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
% Slope: 0.0 **Untreated Arrangement:** INCLUDED single control randomized in each block

Field Prep./Maintenance:
None

Soil Description

Description Name: LEVEL FIELD
% Sand: 11 **% OM:** 2.0 **Texture:** SIL silt loam
% Silt: 75 **pH:** 4.97 **Soil Name:** Canfield Silt Loam
% Clay: 14 **CEC:** 13.9 **Fert. Level:** G good
Soil Drainage: G good

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 2 MI

Application Description

	A
Application Date:	5/24/2011
Time of Day:	11am-12pm
Application Method:	SPRAY
Application Timing:	<12 IN IRONW
Application Placement:	BROADC
Applied By:	TIM KOCH
Air Temperature, Unit:	69.9 F
% Relative Humidity:	84.5
Wind Velocity, Unit:	5.1 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	66.1 F
Soil Moisture:	MOIST
% Cloud Cover:	80
Next Rain Occurred On:	5/24/2011

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	YNIGF
Height, Unit:	12 IN
Height Minimum, Maximum:	2

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TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: #US 565/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	FESAR O
Stage Majority, Percent:	BLOOM
FT	
Height Minimum, Maximum:	2 3
Pest 2 Code, Type, Scale:	GLEHE W
Stage Majority, Percent:	BLOOM
IN	
Height Minimum, Maximum:	4 6
Pest 3 Code, Type, Scale:	PHLPR O
FT	
Height Minimum, Maximum:	2 3
Pest 4 Code, Type, Scale:	POATR O
Stage Majority, Percent:	BLOOM
FT	
Height Minimum, Maximum:	2 3
Pest 5 Code, Type, Scale:	SOOCA W
IN	
Height Minimum, Maximum:	14 18
Pest 6 Code, Type, Scale:	VENAL W
Stage Majority, Percent:	VEG
IN	
Height Minimum, Maximum:	2 8
Pest 7 Code, Type, Scale:	CYPES W
IN	
Height Minimum, Maximum:	0 0
Pest 8 Code, Type, Scale:	HOLLA O
Height, Unit:	0 IN
Pest 9 Code, Type, Scale:	ASTPI W

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: #US 565/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Application Equipment

	A
Appl. Equipment:	SPRAYER
Equipment Type:	BACKPA
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TURBOTWIN
Nozzle Size:	11002VP
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	WATER
Spray Volume, Unit:	25 gal/ac
Mix Size, Unit:	2 liters
Propellant:	CO2

Trt No Treatment Application Comment
Consistent pressure of target weed throughout trial

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: B Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .89617)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
2	MAT 28+	2.0	LB/GAL	SL	0.625	oz ai/a	POST	B	1.562 ml/mx	102	203	305
	2, 4-D AMINE+	3.80		SL	4.75	oz ai/a	POST	B	6.249 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
3	MAT 28+	2.0	LB/GAL	SL	1.0	oz ai/a	POST	B	2.5 ml/mx	103	202	303
	2, 4-D AMINE+	3.80		SL	7.60	oz ai/a	POST	B	9.999 ml/mx			
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
4	RDQ98+	51		WG	0.048	lb ai/a	POST	B	0.9022 g/mx	104	201	302
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
5	RDQ98+	51		WG	0.08	lb ai/a	POST	B	1.504 g/mx	105	204	301
	NIS	1.00		SL	0.25	% v/v	POST	B	4.999 ml/mx			
6	CROSSBOW	3		L	1.5	lb ai/a	POST	B	40.0 ml/mx	106	206	306

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TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Reps: 3 Appl Code: _ Plots: 5 by 25 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .89617)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3
1	UNTREATED CONTROL									101	205	304

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
5.078	ml	MAT 28+	2.0	SL	
20.310	ml	2, 4-D AMINE+	3.80	SL	
24.997	ml	NIS	1.00	SL	
3.007	g	RDQ98+	51	WG	
49.995	ml	CROSSBOW	3	L	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 25 gal/ac, mix size= 2 liters.

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: #US 565/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Rep	Blk										
3	3	301	5	302	4	303	3	304	1	305	2	306	6
2	2	201	4	202	3	203	2	204	5	205	1	206	6
1	1	101	1	102	2	103	3	104	4	105	5	106	6

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TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
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The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

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TALL IRONWEED - WEED CONTROL WITH MAT28

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The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: #US 565/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
O, Other, G-BYRO7, G-OthStg = Other animal or nematode
Pest Code
ASTPI, Symphyotrichum pilosum, = US
SOOCA, Solidago canadensis, = US
CYPES, Cyperus esculentus, = US
VENAL, Vernonia altissima, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8
	Pest Type				W Weed	O Other	O Other	W Weed	W Weed	W Weed	O Other	O Other
	Pest Code				ASTPI	POATR	FESAR	SOOCA	CYPES	VENAL	PHLPR	HOLLA
	Pest Scientific Name				Symphyotrichum>	Poa trivialis	Festuca arundi>	Solidago canad>	Cyperus escule>	Vernonia altis>	Phleum pratense	Holcus lanatus
	Pest Name				WHaster	RSbluegs	T fescue	Cgoldenrod	Ynutsedge	Tironweed	Timothy	velvet grass
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	CROP -	CROP -	WEED -	WEED -	WEED -	CROP -	CROP -
	Rating Date				6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011	6/24/2011
	Rating Type				CONTROL	INJURY	INJURY	CONTROL	CONTROL	CONTROL	INJURY	INJURY
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				31 31	31 31	31 31	31 31	31 31	31 31	31 31	31 31
	Trt-Eval Interval				30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT	30DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 b	0 d	0 b	0 c	0 a	0 a
2	MAT 28+	0.625	oz ai/a	B	90 a	0 a	0 b	83 ab	42 ab	80 a	0 a	0 a
	2, 4-D AMINE+	4.75	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	1.0	oz ai/a	B	90 a	0 a	28 b	80 abc	25 ab	83 a	32 a	0 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.048	lb ai/a	B	85 a	0 a	80 a	68 c	43 ab	85 a	37 a	0 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.08	lb ai/a	B	90 a	10 a	92 a	90 a	63 a	88 a	45 a	0 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	1.5	lb ai/a	B	99 a	0 a	0 b	72 bc	27 ab	43 b	0 a	0 a
	LSD (P=.05)				10.7	12.9	38.9	9.7	30.8	8.6	55.4	0.0
	Standard Deviation				5.9	7.1	21.4	5.3	16.9	4.7	30.5	0.0
	CV				7.8	424.26	64.17	8.1	50.72	7.49	161.28	0.0
	Bartlett's X2				1.08	0.0	5.642	4.65	7.556	1.551	2.531	0.0
	P(Bartlett's X2)				0.782	.	0.06	0.325	0.109	0.671	0.282	.
	Replicate F				6.748	1.000	1.812	0.870	0.190	0.556	0.944	0.000
	Replicate Prob(F)				0.0140	0.4019	0.2130	0.4485	0.8303	0.5905	0.4211	1.0000
	Treatment F				120.361	1.000	11.723	116.065	4.816	164.889	1.443	0.000
	Treatment Prob(F)				0.0001	0.4651	0.0006	0.0001	0.0168	0.0001	0.2903	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	9	10	11	12	13	14	15	16
	Pest Type				W Weed	O Other	O Other	W Weed	W Weed	W Weed	O Other	O Other
	Pest Code				ASTPI	POATR	FESAR	SOOCA	CYPES	VENAL	PHLPR	HOLLA
	Pest Scientific Name				Symphyotrichum>	Poa trivialis	Festuca arundi>	Solidago canad>	Cyperus escule>	Vernonia altis>	Phleum pratense	Holcus lanatus
	Pest Name				WHaster	RSbluegs	T fescue	Cgoldenrod	Ynutsedge	Tironweed	Timothy	velvet grass
	Crop Code				YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	CROP	CROP
	Crop Scientific Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Crop Name				Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
	Part Rated				WEED -	CROP -	CROP -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
	Rating Type				CONTROL	INJURY	INJURY	CONTROL	CONTROL	CONTROL	INJURY	INJURY
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				61 61	61 61	61 61	61 61	61 61	61 61	61 61	61 61
	Trt-Eval Interval				60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT	60DAT
	Number of Decimals				0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 b	0 b	0 b	0 c	0 a	0 a
2	MAT 28+	0.625	oz ai/a	B	99 a	0 a	0 b	99 a	60 a	70 ab	0 a	0 a
	2, 4-D AMINE+	4.75	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	1.0	oz ai/a	B	98 a	0 a	17 b	96 a	65 a	83 a	0 a	0 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.048	lb ai/a	B	99 a	0 a	47 a	98 a	60 a	62 b	7 a	0 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.08	lb ai/a	B	99 a	0 a	50 a	96 a	62 a	83 a	33 a	0 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	1.5	lb ai/a	B	99 a	0 a	0 b	99 a	0 b	0 c	0 a	0 a
	LSD (P=.05)				1.7	0.0	26.9	5.9	16.8	12.6	44.1	0.0
	Standard Deviation				0.9	0.0	14.8	3.2	9.2	6.9	24.3	0.0
	CV				1.15	0.0	78.33	3.97	22.5	13.94	367.01	0.0
	Bartlett's X2				0.0	0.0	0.758	1.281	4.525	2.207	3.634	0.0
	P(Bartlett's X2)				.	.	0.685	0.527	0.21	0.53	0.057	.
	Replicate F				1.000	0.000	1.701	0.711	5.909	3.844	0.776	0.000
	Replicate Prob(F)				0.4019	1.0000	0.2314	0.5143	0.0202	0.0578	0.4862	1.0000
	Treatment F				5484.363	0.000	7.716	458.354	35.675	96.861	0.888	0.000
	Treatment Prob(F)				0.0001	1.0000	0.0033	0.0001	0.0001	0.0001	0.5238	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011 Protocol ID: #US 565/11/01
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Trt No.	Treatment Name	Rate	Unit	Appl Code	17	18	19	20	21	22	23	24
Pest Type					W Weed	O Other	O Other	W Weed	W Weed	W Weed	O Other	O Other
Pest Code					ASTPI	POATR	FESAR	SOOCA	CYPES	VENAL	PHLPR	HOLLA
Pest Scientific Name					Symphyotrichum>	Poa trivialis	Festuca arundi>	Solidago canad>	Cyperus escule>	Vernonia altis>	Phleum pratense	Holcus lanatus
Pest Name					WHaster	RSbluegs	T fescue	Cgoldenrod	Ynutsedge	Tironweed	Timothy	velvet grass
Crop Code					YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX	YNKKX
Crop Scientific Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Crop Name					Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land	Non-crop land
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	CROP -	CROP -
Rating Date					8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011	8/24/2011
Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	INJURY
Rating Unit					%	%	%	%	%	%	%	%
Number of Subsamples					0	0	0	0	0	0	0	0
Days After First/Last Applic.					92 92	92 92	92 92	92 92	92 92	92 92	92 92	92 92
Trt-Eval Interval					90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90DAT	90 DAT
Number of Decimals					0	0	0	0	0	0	0	0
1	UNTREATED CONTROL				0 b	0 a	0 b	0 b	0 b	0 b	0 a	0 a
2	MAT 28+	0.625	oz ai/a	B	96 a	0 a	10 ab	99 a	70 a	67 a	0 a	0 a
	2, 4-D AMINE+	4.75	oz ai/a	B								
	NIS	0.25	% v/v	B								
3	MAT 28+	1.0	oz ai/a	B	99 a	0 a	0 b	94 a	87 a	80 a	0 a	0 a
	2, 4-D AMINE+	7.60	oz ai/a	B								
	NIS	0.25	% v/v	B								
4	RDQ98+	0.048	lb ai/a	B	99 a	0 a	0 b	98 a	65 a	48 a	0 a	0 a
	NIS	0.25	% v/v	B								
5	RDQ98+	0.08	lb ai/a	B	99 a	0 a	22 a	99 a	67 a	58 a	0 a	0 a
	NIS	0.25	% v/v	B								
6	CROSSBOW	1.5	lb ai/a	B	99 a	0 a	0 b	99 a	17 b	3 b	0 a	0 a
LSD (P=.05)					3.9	0.0	13.3	5.9	33.4	29.3	0.0	0.0
Standard Deviation					2.1	0.0	7.3	3.2	18.3	16.1	0.0	0.0
CV					2.59	0.0	138.01	3.98	36.1	37.71	0.0	0.0
Bartlett's X2					0.0	0.0	4.324	2.45	5.928	4.534	0.0	0.0
P(Bartlett's X2)					.	.	0.038*	0.118	0.205	0.339	.	.
Replicate F					1.000	0.000	0.812	1.709	0.050	6.129	0.000	0.000
Replicate Prob(F)					0.4019	1.0000	0.4714	0.2299	0.9519	0.0183	1.0000	1.0000
Treatment F					1076.800	0.000	4.550	454.959	10.433	12.922	0.000	0.000
Treatment Prob(F)					0.0001	1.0000	0.0201	0.0001	0.0010	0.0004	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TALL IRONWEED - WEED CONTROL WITH MAT28

Trial ID: TIRONWCMAT28W 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: #US 565/11/01
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Marsha Martin

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
O, Other, G-BYRO7, G-OthStg = Other animal or nematode
Pest Code
ASTPI, Symphyotrichum pilosum, = US
SOOCA, Solidago canadensis, = US
CYPES, Cyperus esculentus, = US
VENAL, Vernonia altissima, = US
Crop Code
YNKKX, , Non-crop land, = US
Rating Unit
% = percent

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res.Associate
Investigator: Doug Doohan **Title:** Professor

Discipline: H herbicide
Trial Status: F one-year/final **Trial Reliability:** Reliable
Initiation Date: 6/7/2011 **Planned Completion Date:** 9/30/2011

Trial Location

City: Wooster USA 49.376656 **-** 24.53833
State/Prov.: OH -124.715843 **-** -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
Observe Spartan Charge and Authority MTZ DF weed control in tomatoes.

Targets: Barnyardgrass, common purslane, common ragweed, common lambsquarters, ladysthumb, orchardgrass, redroot pigweed

Timing: A = PRT= Pre-transplant
B = POS=Postemergence

Parameters: Take weed control and crop response rating as per standard practice that is applicable to convey to end users.

Conclusions:
There were 7 weed species present in the trial including quackgrass, smooth pigweed, Canada thistle, yellow nutsedge large crabgrass, common purslane, and giant foxtail. Comparing Spartan Charge and Authority applied pretransplant, there was only very slight significant injury with Authority at 7weeks after treatment (WAT), but no significant differences in weed control with either chemical. With the POST treatments, there was significant stunt with Treatment #3 , (Spartan Charge 7.5 oz + Poast 16oz + NIS 0.2pt/A) at 12.5 % at 1WAT. Also there was a significant increase in large crabgrass control with Authority (96%) over Spartan Charge (76.3%) which equalized with time . Yield was not taken.

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor, Res.Associate
Affiliation: OARDC/The Ohio Stater University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023887 **Mobile No.:** 330-466-4023
Investigator: Doug Doohan **Title:** Professor
Affiliation: OARDC/The Ohio Sate University
Address: 1680 Madison Ave.
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu
Phone No.: 3302023887 **Mobile No.:** 330-466-4023

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Cooperator/Landowner

Cooperator: Bruce Williams **Role:** Farm Manager
Organization: OARDC **Org. Type:** Research
Address 1: 1680 Madison Ave.
Phone No.: 3302633878
City: Wooster **Fax No.:** 330-263-3887
State/Prov: OH **Mobile No.:** 330-464-0412
Postal Code: 44691 **E-mail:** williams.20@osu.edu
Country: USA United States

Crop Description

Crop 1: LYPES Lycopersicon esculentum Tomato
Variety: Peto 696 **Description:** processsing tomato
BBCH Scale: BVSO **Planting Date:** 6/9/2011
Planting Method: TRAMAC transplanted - machine
Depth, Unit: 2 IN
Row Spacing, Unit: 6 FT **Spacing Within Row, Unit:** 12 IN
Seed Bed: COMPAC compacted **Soil Temperature, Unit:** 74.2 F
Soil Moisture: NORMAL normal

Pest Description

Pest 1 Type: W **Code:** AGGRE Elytrigia repens
Common Name: Quackgrass

Pest 2 Type: W **Code:** AGRASS Setaria, Digitaria
Common Name: Annual grasses (various)

Pest 3 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Pest 4 Type: W **Code:** CIRAR Cirsium arvense
Common Name: Canada thistle

Pest 5 Type: W **Code:** CYPES Cyperus esculentus
Common Name: Yellow nutsedge

Pest 6 Type: W **Code:** DIGSA Digitaria sanguinalis
Common Name: Large crabgrass

Pest 7 Type: W **Code:** POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed

Pest 8 Type: W **Code:** POROL Portulaca oleracea
Common Name: Common purslane

Pest 9 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Site and Design

Plot Width, Unit: 6 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT PLOT plot
Plot Area, Unit: 150 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:
The trial was maintained with fungicides by the Horticulture Crop Science Farm Manager at OARDC as outlined in the 2011 OSU Vegetable Production Guide.

Soil Description

Description Name: Hort Unit 1 field 7 south
% Sand: 15 **% OM:** 3.0 **Texture:** SIL silt loam
% Silt: 70 **pH:** 6.9 **Soil Name:** Wooster Silt Loam
% Clay: 15 **CEC:** 8.5 **Fert. Level:** G good
Soil Drainage: G good

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC Main Campus **Distance, Unit:** 1 MI

Application Description

	A	B
Application Date:	6/7/2011	6/30/2011
Time of Day:	2:00 PM	2:30 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPLA	POST
Application Placement:	BROSOI	BROFOL
Applied By:	TIM KOCH	TIM KOCH
Air Temperature, Unit:	80 F	85.6 F
% Relative Humidity:	71.1	49
Wind Velocity, Unit:	2.9 MPH	2 MPH
Wind Direction:	S	S/SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	71.4 F	77.5 F
Soil Moisture:	GOOD	GOOD
% Cloud Cover:	100	50
Next Rain Occurred On:	6/7/2011	7/2/2011

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	LYPES BVSO	LYPES BVSO
Stage Scale Used:	PRETRANSP	POST
Height, Unit:	0 IN	12 IN

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AGGRE W PRET	AGGRE W POST
Height, Unit:	0 IN	6 IN
Height Minimum, Maximum:		4 8
Density, Unit:	0 M2	6 M2
Pest 2 Code, Type, Scale:	AGRASS W PRET	AGRASS W POST
Height, Unit:	0 IN	1 IN
Height Minimum, Maximum:		1 2
Density, Unit:	0 M2	12 M2
Pest 3 Code, Type, Scale:	AMARE W PRET	AMARE W POST
Height, Unit:	0 IN	0 IN
Density, Unit:	0 M2	0 M2
Pest 4 Code, Type, Scale:	CIRAR W PRET	CIRAR W POST
Height, Unit:	0 IN	6 IN
Height Minimum, Maximum:		5 7
Density, Unit:	0 M2	10 M2
Pest 5 Code, Type, Scale:	CYPES W PRET	CYPES W POST
Height, Unit:	0 IN	2 IN
Height Minimum, Maximum:		1 3
Density, Unit:	0 M2	6 M2
Pest 6 Code, Type, Scale:	DIGSA W DESC	DIGSA W POST
Height, Unit:	0 IN	2 IN
Height Minimum, Maximum:		1 3
Density, Unit:	0 M2	6 M2
Pest 7 Code, Type, Scale:	POLPY W PRET	POLPY W POST
Height, Unit:	0 IN	0 IN
Density, Unit:	0 M2	0 M2
Pest 8 Code, Type, Scale:	POROL W PRET	POROL W POST
Height, Unit:	0 IN	0 IN
Density, Unit:	0 M2	0 M2
Pest 9 Code, Type, Scale:	SETFA W PRET	SETFA W POST
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:	0 M2	10 M2

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Application Equipment

	A	B
Appl. Equipment:	SPRAYER	SPRAYER
Equipment Type:	BPACK	BPACK
Operation Pressure, Unit:	40 PSI	40 PSI
Nozzle Type:	FLATFAN	FLATFAN
Nozzle Size:	8001VS	8001VS
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	4	4
Band Width, Unit:	76 IN	76 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 gal/ac	10 gal/ac
Mix Size, Unit:	1 liters	1 liters
Propellant:	CO2	CO2

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Reps: 4 Appl Code: A Plots: 6 by 25 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .57355)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
2	SPARTAN CHARGE	3.5	LB/GAL	SE	0.205	lb ai/a	PRETRANS	A	5.857 ml/mx	102	203	301	405
3	SPARTAN CHARGE+	3.5	LB/GAL	SE	0.205	lb ai/a	PRETRANS	A	5.857 ml/mx	103	205	304	402
4	AUTHORITY MTZ	45	%W/W	WG	0.394	lb ai/a	PRETRANS	A	10.49 g/mx	104	202	303	401
5	AUTHORITY MTZ+	45	%W/W	WG	0.394	lb ai/a	PRETRANS	A	10.49 g/mx	105	201	302	404

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Reps: 4 Appl Code: B Plots: 6 by 25 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .57355)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
3	POAST+	1.5	LB/GAL	EC	0.188	lb ai/a	POST	B	12.53 ml/mx	103	205	304	402
	NIS	100	%W/W	SL	0.25	% v/v	POST	B	2.5 ml/mx				
5	POAST+	1.5	LB/GAL	EC	0.188	lb ai/a	POST	B	12.53 ml/mx	105	201	302	404
	NIS	100	%W/W	SL	0.25	% v/v	POST	B	2.5 ml/mx				

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Reps: 4 Appl Code: _ Plots: 6 by 25 feet
Spray vol: 10 gal/ac Mix size: 1 liters (min .57355)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED									101	204	305	403

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
7.321	ml	SPARTAN CHARGE	3.5	SE	
7.321	ml	SPARTAN CHARGE+	3.5	SE	
31.330	ml	POAST+	1.5	EC	
6.249	ml	NIS	100	SL	
13.114	g	AUTHORITY MTZ	45	WG	
13.114	g	AUTHORITY MTZ+	45	WG	

* 'Per area' calculations based on spray volume= 10 gal/ac, mix size= 1 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 10 gal/ac, mix size= 1 liters.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Rep	Blk										
4	4	401	4	402	3	403	1	404	5	405	2
3	3	301	2	302	5	303	4	304	3	305	1
2	2	201	5	202	4	203	2	204	1	205	3
1	1	101	1	102	2	103	3	104	4	105	5

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	1	2	3	4	5	6	7
	Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code							AGRASS	AMACH	AMBEL	CIRAR	POLPY
	Pest Scientific Name							Poa annua	Amaranthus hyb>	Ambrosia artem>	Cirsium arvense	Polygonum pens>
	Pest Name							Annual grasses	Smooth pigweed	Common ragweed	Canada thistle	Pennsylvania s>
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011
	Rating Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					7 7	7 7	7 7	7 7	7 7	7 7	7 7
	Trt-Eval Interval					2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP
	Plant-Eval Interval					5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					203	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					301	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					405	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0.0	0.0	99.0	99.0	99.0	99.0	99.0
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	POAST+	0.188	lb ai/a	B	205	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	B	304	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					402	0.0	0.0	99.0	99.0	99.0	0.0	99.0
					Mean =	0.0	0.0	99.0	99.0	99.0	74.3	99.0
4	AUTHORITY MTZ	0.394	lb ai/a	A	104	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					202	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					303	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					401	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0.0	0.0	99.0	99.0	99.0	99.0	99.0

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code							AGRASS	AMACH	AMBEL	CIRAR	POLPY
Pest Scientific Name							Poa annua	Amaranthus hyb>	Ambrosia artem>	Cirsium arvense	Polygonum pens>
Pest Name							Annual grasses	Smooth pigweed	Common ragweed	Canada thistle	Pennsylvania s>
Crop Code							LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
BBCH Scale							BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Crop Scientific Name							Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name							Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
Crop Variety							Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
Part Rated							PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date							6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011
Rating Type							CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit							%	%	%	%	%	%	%
Number of Subsamples							0	0	0	0	0	0	0
Days After First/Last Applic.							7 7	7 7	7 7	7 7	7 7	7 7	7 7
Trt-Eval Interval							2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP
Plant-Eval Interval							5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	POAST+	0.188	lb ai/a	B	201	0.0	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25	% v/v	B	302	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					404	0.0	0.0	99.0	99.0	99.0	99.0	99.0
					Mean =	0.0	0.0	99.0	99.0	99.0	99.0	99.0

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	8	9	10	11	12	13	14
	Pest Type					W Weed			W Weed	W Weed	W Weed	W Weed
	Pest Code					POROL			AGRRE	AMACH	CIRAR	CYPES
	Pest Scientific Name					Portulaca oler>			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>
	Pest Name					Common purslane			Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -
	Rating Date					6/14/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011
	Rating Type					CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					7 7	28 5	28 5	28 5	28 5	28 5	28 5
	Trt-Eval Interval					2WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP
	Plant-Eval Interval					5 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102	99.0	0.0	0.0	99.0	95.0	80.0	0.0
					203	99.0	0.0	0.0	0.0	99.0	0.0	70.0
					301	99.0	0.0	0.0	99.0	99.0	0.0	0.0
					405	99.0	0.0	0.0	0.0	99.0	50.0	0.0
					Mean =	99.0	0.0	0.0	49.5	98.0	32.5	17.5
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103	99.0						
	POAST+	0.188	lb ai/a	B	205	99.0						
	NIS	0.25	% v/v	B	304	99.0						
					402	99.0						
					Mean =	99.0	.	.	.	.	.	.
4	AUTHORITY MTZ	0.394	lb ai/a	A	104	99.0	0.0	0.0	0.0	99.0	70.0	99.0
					202	99.0	0.0	0.0	0.0	99.0	0.0	0.0
					303	99.0	0.0	0.0	0.0	99.0	0.0	99.0
					401	99.0	0.0	0.0	99.0	99.0	0.0	0.0
					Mean =	99.0	0.0	0.0	24.8	99.0	17.5	49.5

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type						W Weed			W Weed	W Weed	W Weed	W Weed		
Pest Code						POROL			AGRRE	AMACH	CIRAR	CYPES		
Pest Scientific Name						Portulaca oler>			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>		
Pest Name						Common purslane			Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge		
Crop Code						LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES		
BBCH Scale						BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO		
Crop Scientific Name						Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>		
Crop Name						Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato		
Crop Variety						Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696		
Part Rated						WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -		
Rating Date						6/14/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011		
Rating Type						CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit						%	%	%	%	%	%	%		
Number of Subsamples						0	0	0	0	0	0	0		
Days After First/Last Applic.						7 7	28 5	28 5	28 5	28 5	28 5	28 5		
Trt-Eval Interval						2WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP		
Plant-Eval Interval						5 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1		
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	8	9	10	11	12	13	14		
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105	99.0								
	POAST+	0.188	lb ai/a	B	201	99.0								
	NIS	0.25	% v/v	B	302	99.0								
					404	99.0								
					Mean =	99.0	.	.	.	.	.	.		

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	15	16	17	18	19	20	21
	Pest Type					W Weed	W Weed	W Weed			W Weed	W Weed
	Pest Code					DIGSA	POROL	SETFA			AGGRE	AMACH
	Pest Scientific Name					Digitaria sang>	Portulaca oler>	Setaria faberi				Amaranthus hyb>
	Pest Name					Large crabgrass	Common purslane	Giant foxtail			Quackgrass	Smooth pigweed
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Date					7/5/2011	7/5/2011	7/5/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	1	1	1	1
	Days After First/Last Applic.					28 5	28 5	28 5	50 27	50 27	50 27	50 27
	Trt-Eval Interval					4WATPRETP	4WATPRETP	4WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP
	Plant-Eval Interval					26 DP-1	26 DP-1	26 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102	85.0	95.0	99.0	0.0	0.0	65.0	99.0
					203	85.0	99.0	99.0	0.0	0.0	70.0	99.0
					301	99.0	99.0	90.0	0.0	5.0	90.0	99.0
					405	80.0	85.0	95.0	0.0	5.0	65.0	99.0
					Mean =	87.3	94.5	95.8	0.0	2.5	72.5	99.0
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103							
	POAST+	0.188	lb ai/a	B	205							
	NIS	0.25	% v/v	B	304							
					402							
					Mean =	.	.	.	.	.	.	.
4	AUTHORITY MTZ	0.394	lb ai/a	A	104	90.0	99.0	90.0	0.0	0.0	70.0	99.0
					202	98.0	99.0	99.0	0.0	5.0	90.0	99.0
					303	85.0	99.0	85.0	0.0	5.0	75.0	99.0
					401	98.0	99.0	99.0	0.0	5.0	95.0	99.0
					Mean =	92.8	99.0	93.3	0.0	3.8	82.5	99.0

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed	W Weed	W Weed			W Weed	W Weed
Pest Code							DIGSA	POROL	SETFA			AGGRE	AMACH
Pest Scientific Name							Digitaria sang>	Portulaca oler>	Setaria faberi				Amaranthus hyb>
Pest Name							Large crabgrass	Common purslane	Giant foxtail			Quackgrass	Smooth pigweed
Crop Code							LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
BBCH Scale							BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Crop Scientific Name							Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name							Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
Crop Variety							Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
Part Rated							WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
Rating Date							7/5/2011	7/5/2011	7/5/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011
Rating Type							CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL
Rating Unit							%	%	%	%	%	%	%
Number of Subsamples							0	0	0	1	1	1	1
Days After First/Last Applic.							28 5	28 5	28 5	50 27	50 27	50 27	50 27
Trt-Eval Interval							4WATPRETP	4WATPRETP	4WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP
Plant-Eval Interval							26 DP-1	26 DP-1	26 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	15	16	17	18	19	20	21
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105							
	POAST+	0.188	lb ai/a	B	201							
	NIS	0.25	% v/v	B	302							
					404							
					Mean =	.	.	.	.	.	.	.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed		
	Pest Code					CIRAR	CYPES	DIGSA	POROL	SETFA		
	Pest Scientific Name					Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi		
	Pest Name					Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail		
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	PLANT -	PLANT -
	Rating Date					7/27/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	6/21/2011	6/21/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					50 27	50 27	50 27	50 27	50 27	14 14	14 14
	Trt-Eval Interval					7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	1WATPOST	1WATPOST
	Plant-Eval Interval					48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	12 DP-1	12 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102	80.0	80.0	65.0	60.0	65.0		
					203	0.0	99.0	70.0	99.0	70.0		
					301	0.0	80.0	90.0	65.0	90.0		
					405	60.0	99.0	65.0	95.0	65.0		
					Mean =	35.0	89.5	72.5	79.8	72.5	.	.
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103						0.0	10.0
	POAST+	0.188	lb ai/a	B	205						0.0	15.0
	NIS	0.25	% v/v	B	304						0.0	15.0
					402						0.0	10.0
					Mean =	.	.	.	.	.	0.0	12.5
4	AUTHORITY MTZ	0.394	lb ai/a	A	104	90.0	99.0	70.0	95.0	70.0		
					202	0.0	99.0	90.0	99.0	90.0		
					303	0.0	99.0	75.0	99.0	75.0		
					401	0.0	70.0	75.0	95.0	75.0		
					Mean =	22.5	91.8	77.5	97.0	77.5	.	.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type			W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code			CIRAR	CYPES	DIGSA	POROL	SETFA	
Pest Scientific Name			Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi	
Pest Name			Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail	
Crop Code			LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
BBCH Scale			BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Crop Scientific Name			Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name			Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
Crop Variety			Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
Part Rated			WEED -	WEED -	WEED -	WEED -	WEED -	PLANT -	PLANT -
Rating Date			7/27/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	6/21/2011	6/21/2011
Rating Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT
Rating Unit			%	%	%	%	%	%	%
Number of Subsamples			0	0	0	0	0	0	0
Days After First/Last Applic.			50 27	50 27	50 27	50 27	50 27	14 14	14 14
Trt-Eval Interval			7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	1WATPOST	1WATPOST
Plant-Eval Interval			48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	12 DP-1	12 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	23	24	25	26	27	28
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105						0.0	0.0
	POAST+	0.188	lb ai/a	B	201						0.0	0.0
	NIS	0.25	% v/v	B	302						0.0	0.0
					404						0.0	0.0
					Mean =	.	.	.	.	.	0.0	0.0

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	29	30	31	32	33	34	35
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					AGRRE	AMACH	CIRAR	CYPES	DIGSA	POROL	SETFA
	Pest Scientific Name					Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi
	Pest Name					Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					30 7	30 7	30 7	30 7	30 7	30 7	30 7
	Trt-Eval Interval					1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST
	Plant-Eval Interval					28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102							
					203							
					301							
					405							
					Mean =	.	.	.	.	.	.	.
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103	0.0	99.0	0.0	0.0	70.0	99.0	90.0
	POAST+	0.188	lb ai/a	B	205	0.0	99.0	0.0	0.0	80.0	99.0	80.0
	NIS	0.25	% v/v	B	304	0.0	99.0	0.0	0.0	75.0	99.0	90.0
					402	0.0	99.0	0.0	0.0	80.0	99.0	80.0
					Mean =	0.0	99.0	0.0	0.0	76.3	99.0	85.0
4	AUTHORITY MTZ	0.394	lb ai/a	A	104							
					202							
					303							
					401							
					Mean =	.	.	.	.	.	.	.

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							AGRRE	AMACH	CIRAR	CYPES	DIGSA	POROL	SETFA	
Pest Scientific Name							Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi	
Pest Name							Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail	
Crop Code							LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	
BBCH Scale							BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Crop Scientific Name							Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	
Crop Name							Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	
Crop Variety							Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							30 7	30 7	30 7	30 7	30 7	30 7	30 7	
Trt-Eval Interval							1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	
Plant-Eval Interval							28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		29	30	31	32	33	34	35	
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105		85.0	99.0	0.0	0.0	95.0	99.0	95.0	
	POAST+	0.188	lb ai/a	B	201		80.0	99.0	0.0	0.0	95.0	99.0	99.0	
	NIS	0.25	% v/v	B	302		0.0	99.0	0.0	0.0	95.0	99.0	95.0	
					404		85.0	99.0	0.0	0.0	99.0	99.0	99.0	
						Mean =	62.5	99.0	0.0	0.0	96.0	99.0	97.0	

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	36	37	38	39	40	41	42
	Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code							AGRRE	AMACH	CIRAR	CYPES	DIGSA
	Pest Scientific Name							Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>
	Pest Name							Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass
	Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated					PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011
	Rating Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					44 21	44 21	44 21	44 21	44 21	44 21	44 21
	Trt-Eval Interval					3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	Plant-Eval Interval					42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SPARTAN CHARGE	0.205	lb ai/a	A	102							
					203							
					301							
					405							
					Mean =	.	.	.	.	.	.	.
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103	0.0	10.0	99.0	95.0	50.0	0.0	90.0
	POAST+	0.188	lb ai/a	B	205	0.0	0.0	0.0	99.0	0.0	0.0	99.0
	NIS	0.25	% v/v	B	304	0.0	10.0	0.0	99.0	0.0	0.0	95.0
					402	0.0	5.0	0.0	95.0	20.0	0.0	95.0
					Mean =	0.0	6.3	24.8	97.0	17.5	0.0	94.8
4	AUTHORITY MTZ	0.394	lb ai/a	A	104							
					202							
					303							
					401							
					Mean =	.	.	.	.	.	.	.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							AGRRE	AMACH	CIRAR	CYPES	DIGSA			
Pest Scientific Name							Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>			
Pest Name							Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass			
Crop Code						LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	
BBCH Scale						BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Crop Scientific Name						Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	
Crop Name						Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	
Crop Variety						Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	
Part Rated						PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date						7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	
Rating Type						CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit						%	%	%	%	%	%	%	%	
Number of Subsamples						0	0	0	0	0	0	0	0	
Days After First/Last Applic.						44 21	44 21	44 21	44 21	44 21	44 21	44 21	44 21	
Trt-Eval Interval						3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	
Plant-Eval Interval						42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	36	37	38	39	40	41	42		
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105	0.0	0.0	0.0	99.0	99.0	0.0	98.0		
	POAST+	0.188	lb ai/a	B	201	0.0	0.0	99.0	99.0	0.0	0.0	99.0		
	NIS	0.25	% v/v	B	302	0.0	0.0	99.0	99.0	0.0	0.0	99.0		
					404	0.0	0.0	0.0	99.0	60.0	20.0	99.0		
					Mean =	0.0	0.0	49.5	99.0	39.8	5.0	98.8		

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type						W Weed	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code						POROL	SETFA			AGRRE	AMACH	CIRAR		
Pest Scientific Name						Portulaca oler>	Setaria faberi			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense		
Pest Name						Common purslane	Giant foxtail			Quackgrass	Smooth pigweed	Canada thistle		
Crop Code						LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES		
BBCH Scale						BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO		
Crop Scientific Name						Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>		
Crop Name						Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato		
Crop Variety						Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696		
Part Rated						WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -		
Rating Date						7/21/2011	7/21/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011		
Rating Type						CONTROL	CONTROL	CHLOROSIS	STUNT	CHLOROSIS	CHLOROSIS	CHLOROSIS		
Rating Unit						%	%	%	%	%	%	%		
Number of Subsamples						0	0	0	0	0	0	0		
Days After First/Last Applic.						44 21	44 21	65 42	65 42	65 42	65 42	65 42		
Trt-Eval Interval						3WATPOST	3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST		
Plant-Eval Interval						42 DP-1	42 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1		
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	43	44	45	46	47	48	49		
1	UNTREATED				101	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					204	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					305	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					403	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
					Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	SPARTAN CHARGE	0.205	lb ai/a	A	102									
					203									
					301									
					405									
					Mean =	.	.	.	.	.	.	.		
3	SPARTAN CHARGE+	0.205	lb ai/a	A	103	0.0	90.0	0.0	0.0	0.0	99.0	0.0		
	POAST+	0.188	lb ai/a	B	205	99.0	99.0	0.0	0.0	0.0	99.0	0.0		
	NIS	0.25	% v/v	B	304	99.0	95.0	0.0	0.0	0.0	90.0	0.0		
					402	95.0	95.0	0.0	0.0	0.0	99.0	0.0		
					Mean =	73.3	94.8	0.0	0.0	0.0	96.8	0.0		
4	AUTHORITY MTZ	0.394	lb ai/a	A	104									
					202									
					303									
					401									
					Mean =	.	.	.	.	.	.	.		

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type							W Weed	W Weed			W Weed	W Weed	W Weed	
Pest Code							POROL	SETFA			AGRRE	AMACH	CIRAR	
Pest Scientific Name							Portulaca oler>	Setaria faberi			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	
Pest Name							Common purslane	Giant foxtail			Quackgrass	Smooth pigweed	Canada thistle	
Crop Code							LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	
BBCH Scale							BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Crop Scientific Name							Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	
Crop Name							Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	
Crop Variety							Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	
Part Rated							WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	
Rating Date							7/21/2011	7/21/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	
Rating Type							CONTROL	CONTROL	CHLOROSIS	STUNT	CHLOROSIS	CHLOROSIS	CHLOROSIS	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							44 21	44 21	65 42	65 42	65 42	65 42	65 42	
Trt-Eval Interval							3WATPOST	3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST	
Plant-Eval Interval							42 DP-1	42 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		43	44	45	46	47	48	49	
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105		99.0	98.0	0.0	0.0	0.0	95.0	99.0	
	POAST+	0.188	lb ai/a	B	201		99.0	99.0	0.0	0.0	0.0	99.0	0.0	
	NIS	0.25	% v/v	B	302		99.0	99.0	0.0	0.0	0.0	99.0	0.0	
					404		95.0	99.0	0.0	0.0	0.0	99.0	95.0	
						Mean =	98.0	98.8	0.0	0.0	0.0	98.0	48.5	

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

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The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type					W Weed	W Weed	W Weed	W Weed
Pest Code					CYPES	DIGSA	POROL	SETFA
Pest Scientific Name					Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi
Pest Name					Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail
Crop Code					LYPES	LYPES	LYPES	LYPES
BBCH Scale					BVSO	BVSO	BVSO	BVSO
Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name					Tomato	Tomato	Tomato	Tomato
Crop Variety					Peto 696	Peto 696	Peto 696	
Part Rated					WEED -	WEED -	WEED -	WEED -
Rating Date					8/11/2011	8/11/2011	8/11/2011	8/11/2011
Rating Type					CHLOROSIS	CHLOROSIS	CHLOROSIS	CHLOROSIS
Rating Unit					%	%	%	%
Number of Subsamples					0	0	0	0
Days After First/Last Applic.					65 42	65 42	65 42	65 42
Trt-Eval Interval					6WATPOST	6WATPOST	6WATPOST	6WATPOST
Plant-Eval Interval					63 DP-1	63 DP-1	63 DP-1	63 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	50	51	52	53
5	AUTHORITY MTZ+	0.394	lb ai/a	A	105	0.0	95.0	99.0	0.0
	POAST+	0.188	lb ai/a	B	201	0.0	99.0	99.0	0.0
	NIS	0.25	% v/v	B	302	0.0	99.0	99.0	0.0
					404	20.0	99.0	0.0	99.0
					Mean =	5.0	98.0	74.3	24.8

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
AMACH, Amaranthus hybridus, = US
AMBEL, Ambrosia artemisiifolia, = US
CIRAR, Cirsium arvense, = US
POROL, Portulaca oleracea, = US
AGRRE, Elytrigia repens, = US
CYPES, Cyperus esculentus, = US
DIGSA, Digitaria sanguinalis, = US
SETFA, Setaria faberi, = US
Crop Code
LYPES, BVSO, Lycopersicon esculentum, = US
Part Rated
PLANT = plant
Rating Unit
% = percent
Plant-Eval Interval
5 DP-1 = 1 6/9/2011
26 DP-1 = 1 6/9/2011
48 DP-1 = 1 6/9/2011
12 DP-1 = 1 6/9/2011
28 DP-1 = 1 6/9/2011
42 DP-1 = 1 6/9/2011
63 DP-1 = 1 6/9/2011

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRASS	AMACH	AMBEL	CIRAR	POLPY	POROL
Pest Scientific Name				Poa annua	Amaranthus hyb>	Ambrosia artem>	Cirsium arvense	Polygonum pens>	Portulaca oler>
Pest Name				Annual grasses	Smooth pigweed	Common ragweed	Canada thistle	Pennsylvania s>	Common purslane
Crop Code			LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
BBCH Scale			BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Crop Scientific Name			Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name			Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
Crop Variety			Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
Part Rated			PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date			6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011	6/14/2011
Rating Type			CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%	%
Number of Subsamples			0	0	0	0	0	0	0
Days After First/Last Applic.			7 7	7 7	7 7	7 7	7 7	7 7	7 7
Trt-Eval Interval			2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP	2WATPRETP
Plant-Eval Interval			5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1	5 DP-1
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8
1	UNTREATED				0.0 a	0.0 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	SPARTAN CHARGE	0.205	lb ai/a	A	0.0 a	0.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a
3	SPARTAN CHARGE+	0.205	lb ai/a	A	0.0 a	0.0 a	99.0 a	99.0 a	99.0 a	74.3 a	99.0 a	99.0 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
4	AUTHORITY MTZ	0.394	lb ai/a	A	0.0 a	0.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a
5	AUTHORITY MTZ+	0.394	lb ai/a	A	0.0 a	0.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a	99.0 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
LSD (P=.05)					0.00	0.00	0.00	0.00	0.00	34.11	0.00	0.00
Standard Deviation					0.00	0.00	0.00	0.00	0.00	22.14	0.00	0.00
CV					0.0	0.0	0.0	0.0	0.0	29.81	0.0	0.0
Bartlett's X2					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)					.	.	.	.	.	.	.	.
Replicate F					0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000
Replicate Prob(F)					1.0000	1.0000	1.0000	1.0000	1.0000	0.4262	1.0000	1.0000
Treatment F					0.000	0.000	0.000	0.000	0.000	15.000	0.000	0.000
Treatment Prob(F)					1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRRE	AMACH	CIRAR	CYPES	DIGSA	POROL
Pest Scientific Name				Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>
Pest Name				Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane
Crop Code		LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
BBCH Scale		BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Crop Scientific Name		Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
Crop Name		Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
Crop Variety		Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
Part Rated		PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date		7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011	7/5/2011
Rating Type		CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit		%	%	%	%	%	%	%	%
Number of Subsamples		0	0	0	0	0	0	0	0
Days After First/Last Applic.		28 5	28 5	28 5	28 5	28 5	28 5	28 5	28 5
Trt-Eval Interval		4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP	4WATPRETP
Plant-Eval Interval		26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1
Trt No.	Treatment Name	Rate Unit Code	9	10	11	12	13	14	15	16
1	UNTREATED		0.0 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 a	0.0 b	0.0 b
2	SPARTAN CHARGE	0.205 lb ai/a A	0.0 a	0.0 a	49.5 a	98.0 a	32.5 a	17.5 a	87.3 a	94.5 a
3	SPARTAN CHARGE+	0.205 lb ai/a A								
	POAST+	0.188 lb ai/a B								
	NIS	0.25 % v/v B								
4	AUTHORITY MTZ	0.394 lb ai/a A	0.0 a	0.0 a	24.8 a	99.0 a	17.5 a	49.5 a	92.8 a	99.0 a
5	AUTHORITY MTZ+	0.394 lb ai/a A								
	POAST+	0.188 lb ai/a B								
	NIS	0.25 % v/v B								
LSD (P=.05)			0.00	0.00	85.65	2.00	40.89	75.07	12.35	6.60
Standard Deviation			0.00	0.00	49.50	1.15	23.63	43.39	7.14	3.82
CV			0.0	0.0	200.0	1.76	141.77	194.27	11.89	5.91
Bartlett's X2			0.0	0.0	0.06	0.0	0.042	0.672	0.174	0.0
P(Bartlett's X2)			.	.	0.807	.	0.838	0.412	0.677	.
Replicate F			0.000	0.000	0.333	1.000	2.985	0.386	0.118	1.000
Replicate Prob(F)			1.0000	1.0000	0.8022	0.4547	0.1179	0.7671	0.9463	0.4547
Treatment F			0.000	0.000	1.000	9703.001	1.896	1.339	212.705	858.847
Treatment Prob(F)			1.0000	1.0000	0.4219	0.0001	0.2301	0.3305	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code									
Pest Type					W Weed			W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code					SETFA			AGGRE	AMACH	CIRAR	CYPES	DIGSA	
Pest Scientific Name					Setaria faberi				Amaranthus hyb>	Cirsium arvense	Cyperus escule>	Digitaria sang>	
Pest Name					Giant foxtail			Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge	Large crabgrass	
Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	
BBCH Scale					BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Crop Scientific Name					Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	
Crop Name					Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	
Crop Variety					Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	
Part Rated					WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date					7/5/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	
Rating Type					CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	%	%	%	%	
Number of Subsamples					0	1	1	1	1	0	0	0	
Days After First/Last Applic.					28 5	50 27	50 27	50 27	50 27	50 27	50 27	50 27	
Trt-Eval Interval					4WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	7WATPRETP	
Plant-Eval Interval					26 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	
					17	18	19	20	21	22	23	24	
1	UNTREATED				0.0 b	0.0 a	0.0 a	0.0 b	0.0 b	0.0 a	0.0 b	0.0 b	
2	SPARTAN CHARGE	0.205	lb ai/a	A	95.8 a	0.0 a	2.5 a	72.5 a	99.0 a	35.0 a	89.5 a	72.5 a	
3	SPARTAN CHARGE+	0.205	lb ai/a	A									
	POAST+	0.188	lb ai/a	B									
	NIS	0.25	% v/v	B									
4	AUTHORITY MTZ	0.394	lb ai/a	A	93.3 a	0.0 a	3.8 a	82.5 a	99.0 a	22.5 a	91.8 a	77.5 a	
5	AUTHORITY MTZ+	0.394	lb ai/a	A									
	POAST+	0.188	lb ai/a	B									
	NIS	0.25	% v/v	B									
LSD (P=.05)					7.02	0.00	3.22	18.24	0.00	48.68	20.53	14.70	
Standard Deviation					4.06	0.00	1.86	10.54	0.00	28.14	11.87	8.50	
CV					6.44	0.0	89.44	20.4	0.0	146.8	19.64	17.0	
Bartlett's X2					0.661	0.0	0.06	0.0	0.0	0.022	0.223	0.289	
P(Bartlett's X2)					0.416	.	0.807	.	.	0.882	0.637	0.591	
Replicate F					2.037	0.000	2.200	0.550	0.000	2.705	0.348	1.000	
Replicate Prob(F)					0.2103	1.0000	0.1889	0.6664	1.0000	0.1384	0.7925	0.4547	
Treatment F					723.233	0.000	4.200	72.975	0.000	1.589	77.806	104.192	
Treatment Prob(F)					0.0001	1.0000	0.0723	0.0001	1.0000	0.2793	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	25	26	27	28	29	30	31	32
	Pest Type				W Weed	W Weed			W Weed	W Weed	W Weed	W Weed
	Pest Code				POROL	SETFA			AGRRE	AMACH	CIRAR	CYPES
	Pest Scientific Name				Portulaca oler>	Setaria faberi			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense	Cyperus escule>
	Pest Name				Common purslane	Giant foxtail			Quackgrass	Smooth pigweed	Canada thistle	Yellow nutsedge
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale				BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name				Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name				Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety				Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated				WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -	WEED -
	Rating Date				7/27/2011	7/27/2011	6/21/2011	6/21/2011	7/7/2011	7/7/2011	7/7/2011	7/7/2011
	Rating Type				CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				50 27	50 27	14 14	14 14	30 7	30 7	30 7	30 7
	Trt-Eval Interval				7WATPRETP	7WATPRETP	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST	1WATPOST
	Plant-Eval Interval				48 DP-1	48 DP-1	12 DP-1	12 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1
1	UNTREATED				0.0 b	0.0 b	0.0 a	0.0 b	0.0 b	0.0 b	0.0 a	0.0 a
2	SPARTAN CHARGE	0.205	lb ai/a	A	79.8 a	72.5 a						
3	SPARTAN CHARGE+	0.205	lb ai/a	A			0.0 a	12.5 a	0.0 b	99.0 a	0.0 a	0.0 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
4	AUTHORITY MTZ	0.394	lb ai/a	A	97.0 a	77.5 a						
5	AUTHORITY MTZ+	0.394	lb ai/a	A			0.0 a	0.0 b	62.5 a	99.0 a	0.0 a	0.0 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
	LSD (P=.05)				20.05	14.70	0.00	2.88	41.69	0.00	0.00	0.00
	Standard Deviation				11.59	8.50	0.00	1.67	24.09	0.00	0.00	0.00
	CV				19.67	17.0	0.0	40.0	115.65	0.0	0.0	0.0
	Bartlett's X2				8.612	0.289	0.0	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)				0.003*	0.591	.	.	.	.	.	.
	Replicate F				1.045	1.000	0.000	1.000	1.000	0.000	0.000	0.000
	Replicate Prob(F)				0.4384	0.4547	1.0000	0.4547	0.4547	1.0000	1.0000	1.0000
	Treatment F				79.752	104.192	0.000	75.000	8.971	0.000	0.000	0.000
	Treatment Prob(F)				0.0001	0.0001	1.0000	0.0001	0.0157	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID: SULF.TOM.11.JPR.01.PRT
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	33	34	35	36	37	38	39	40
	Pest Type				W Weed	W Weed	W Weed			W Weed	W Weed	W Weed
	Pest Code				DIGSA	POROL	SETFA			AGRRE	AMACH	CIRAR
	Pest Scientific Name				Digitaria sang>	Portulaca oler>	Setaria faberi			Elytrigia repe>	Amaranthus hyb>	Cirsium arvense
	Pest Name				Large crabgrass	Common purslane	Giant foxtail			Quackgrass	Smooth pigweed	Canada thistle
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale				BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name				Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name				Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety				Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated				WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -	WEED -
	Rating Date				7/7/2011	7/7/2011	7/7/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011	7/21/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				30 7	30 7	30 7	44 21	44 21	44 21	44 21	44 21
	Trt-Eval Interval				1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST	3WATPOST
	Plant-Eval Interval				28 DP-1	28 DP-1	28 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1
1	UNTREATED				0.0 c	0.0 b	0.0 c	0.0 a	0.0 b	0.0 a	0.0 b	0.0 a
2	SPARTAN CHARGE	0.205	lb ai/a	A								
3	SPARTAN CHARGE+	0.205	lb ai/a	A	76.3 b	99.0 a	85.0 b	0.0 a	6.3 a	24.8 a	97.0 a	17.5 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
4	AUTHORITY MTZ	0.394	lb ai/a	A								
5	AUTHORITY MTZ+	0.394	lb ai/a	A	96.0 a	99.0 a	97.0 a	0.0 a	0.0 b	49.5 a	99.0 a	39.8 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
	LSD (P=.05)				4.68	0.00	7.20	0.00	4.78	85.65	2.31	42.34
	Standard Deviation				2.70	0.00	4.16	0.00	2.76	49.50	1.33	24.47
	CV				4.71	0.0	6.86	0.0	132.67	200.0	2.04	128.22
	Bartlett's X2				1.977	0.0	2.157	0.0	0.0	0.06	0.0	1.393
	P(Bartlett's X2)				0.16	.	0.142	.	.	0.807	.	0.238
	Replicate F				1.684	0.000	0.231	0.000	1.000	0.333	1.000	2.875
	Replicate Prob(F)				0.2684	1.0000	0.8718	1.0000	0.4547	0.8022	0.4547	0.1255
	Treatment F				1407.160	0.000	645.308	0.000	6.818	1.000	7205.251	2.652
	Treatment Prob(F)				0.0001	1.0000	0.0001	1.0000	0.0285	0.4219	0.0001	0.1496

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Unit	Appl Code	41	42	43	44	45	46	47	48
	Pest Type				W Weed	W Weed	W Weed	W Weed			W Weed	W Weed
	Pest Code				CYPES	DIGSA	POROL	SETFA			AGRRE	AMACH
	Pest Scientific Name				Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi			Elytrigia repe>	Amaranthus hyb>
	Pest Name				Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail			Quackgrass	Smooth pigweed
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale				BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name				Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name				Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety				Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696	Peto 696
	Part Rated				WEED -	WEED -	WEED -	WEED -	PLANT -	PLANT -	WEED -	WEED -
	Rating Date				7/21/2011	7/21/2011	7/21/2011	7/21/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CHLOROSIS	CHLOROSIS
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				44 21	44 21	44 21	44 21	65 42	65 42	65 42	65 42
	Trt-Eval Interval				3WATPOST	3WATPOST	3WATPOST	3WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST
	Plant-Eval Interval				42 DP-1	42 DP-1	42 DP-1	42 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1
1	UNTREATED				0.0 a	0.0 c	0.0 b	0.0 c	0.0 a	0.0 a	0.0 a	0.0 b
2	SPARTAN CHARGE	0.205	lb ai/a	A								
3	SPARTAN CHARGE+	0.205	lb ai/a	A	0.0 a	94.8 b	73.3 a	94.8 b	0.0 a	0.0 a	0.0 a	96.8 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
4	AUTHORITY MTZ	0.394	lb ai/a	A								
5	AUTHORITY MTZ+	0.394	lb ai/a	A	5.0 a	98.8 a	98.0 a	98.8 a	0.0 a	0.0 a	0.0 a	98.0 a
	POAST+	0.188	lb ai/a	B								
	NIS	0.25	% v/v	B								
	LSD (P=.05)				9.99	3.50	49.16	3.50	0.00	0.00	0.00	5.21
	Standard Deviation				5.77	2.02	28.41	2.02	0.00	0.00	0.00	3.01
	CV				346.41	3.13	49.77	3.13	0.0	0.0	0.0	4.64
	Bartlett's X2				0.0	7.68	14.542	7.68	0.0	0.0	0.0	1.731
	P(Bartlett's X2)				.	0.006*	0.001*	0.006*	.	.	.	0.188
	Replicate F				1.000	1.388	0.964	1.388	0.000	0.000	0.000	0.670
	Replicate Prob(F)				0.4547	0.3343	0.4684	0.3343	1.0000	1.0000	1.0000	0.6010
	Treatment F				1.000	3060.429	12.871	3060.429	0.000	0.000	0.000	1392.009
	Treatment Prob(F)				0.4219	0.0001	0.0068	0.0001	1.0000	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	49	50	51	52	53
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				CIRAR	CYPES	DIGSA	POROL	SETFA
	Pest Scientific Name				Cirsium arvense	Cyperus escule>	Digitaria sang>	Portulaca oler>	Setaria faberi
	Pest Name				Canada thistle	Yellow nutsedge	Large crabgrass	Common purslane	Giant foxtail
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	BBCH Scale				BVSO	BVSO	BVSO	BVSO	BVSO
	Crop Scientific Name				Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>	Lycopersicon e>
	Crop Name				Tomato	Tomato	Tomato	Tomato	Tomato
	Crop Variety				Peto 696	Peto 696	Peto 696	Peto 696	
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Rating Type				CHLOROSIS	CHLOROSIS	CHLOROSIS	CHLOROSIS	CHLOROSIS
	Rating Unit				%	%	%	%	%
	Number of Subsamples				0	0	0	0	0
	Days After First/Last Applic.				65 42	65 42	65 42	65 42	65 42
	Trt-Eval Interval				6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST
	Plant-Eval Interval				63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1
1	UNTREATED				0.0 a	0.0 a	0.0 b	0.0 b	0.0 a
2	SPARTAN CHARGE	0.205	lb ai/a	A					
3	SPARTAN CHARGE+	0.205	lb ai/a	A	0.0 a	0.0 a	95.8 a	0.0 b	45.0 a
	POAST+	0.188	lb ai/a	B					
	NIS	0.25	% v/v	B					
4	AUTHORITY MTZ	0.394	lb ai/a	A					
5	AUTHORITY MTZ+	0.394	lb ai/a	A	48.5 a	5.0 a	98.0 a	74.3 a	24.8 a
	POAST+	0.188	lb ai/a	B					
	NIS	0.25	% v/v	B					
	LSD (P=.05)				55.97	9.99	3.81	49.45	59.24
	Standard Deviation				32.35	5.77	2.20	28.58	34.24
	CV				200.09	346.41	3.41	115.47	147.26
	Bartlett's X2				0.0	0.0	1.533	0.0	0.008
	P(Bartlett's X2)				.	.	0.216	.	0.93
	Replicate F				1.000	1.000	2.577	1.000	2.407
	Replicate Prob(F)				0.4547	0.4547	0.1494	0.4547	0.1657
	Treatment F				2.997	1.000	2575.149	9.000	1.733
	Treatment Prob(F)				0.1252	0.4219	0.0001	0.0156	0.2546

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH SPARTAN CHARGE

Trial ID: TOMSPARTANCHARGEW 2011 Protocol ID: SULF.TOM.11.JPR.01.PRT
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Joe Reed

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
AMACH, Amaranthus hybridus, = US
AMBEL, Ambrosia artemisiifolia, = US
CIRAR, Cirsium arvense, = US
POROL, Portulaca oleracea, = US
AGRRE, Elytrigia repens, = US
CYPES, Cyperus esculentus, = US
DIGSA, Digitaria sanguinalis, = US
SETFA, Setaria faberi, = US
Crop Code
LYPES, BVSO, Lycopersicon esculentum, = US
Part Rated
PLANT = plant
Rating Unit
% = percent
Plant-Eval Interval
5 DP-1 = 1 6/9/2011
26 DP-1 = 1 6/9/2011
48 DP-1 = 1 6/9/2011
12 DP-1 = 1 6/9/2011
28 DP-1 = 1 6/9/2011
42 DP-1 = 1 6/9/2011
63 DP-1 = 1 6/9/2011

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

General Trial Information

Study Director: Doug Doohan and Tim Koch **Title:** Professor, and Research Associate
Investigator: Doug Doohan and Tim Koch **Title:** Professor, and Research Associate

Discipline: H herbicide
Trial Status: I one-year/interim **Trial Reliability:** Reliable
Initiation Date: 6/27/2011 **Planned Completion Date:** 9/15/2011

Trial Location

City: Wooster USA 49.376656 - 24.53833
State/Prov.: OH -124.715843 - -66.968887
Postal Code: 44691
Country: USA United States

Objectives:
Objective: Evaluate a trifluralin DG formulation for the agricultural market, which does not require soil incorporation.

All treatments were applied PRE to bare ground.

Our strategy was:

Step 1. Apply soil incorporated treatments (1-5), and double disc harrow the entire field.

Step 2. Apply not incorporated , water-in treatments (6-10)

Step 3. Lay irrigation pipe and irrigate the entire field with a specified volume

Step 4. Remove irrigation equipment

Step 5. Apply non incorporated , non watered in treatments (11-15)

Conclusions:
We had eight weed species present in the trial; They are listed below in order of Bayer Code along with relative density of the weed in the trial. "AGRASS" , or annual grass, is a non-Bayer code used in early ratings

CODE	SCIENTIFIC NAME	COMMON NAME	DENSITY
AMACH	amaranthus hybridus	smooth pigweed	high

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
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Sponsor Contact: Tim Birthisel

CHEAL	chenopodium album	common lambsquarters	low
CIRAR	cirsiun arvense	Canada thistle	low-medium
DIGSA	digitaria sanguinalis	large crabgrass	medium
ECHCG	echinochloa crus-galli	common barnyardgrass	medium-high
PANDI	panicum dichotomiflorum Michx	fall panicum	medium
POLPY	persicaria pensylvanica	Pennsylvania smartweed	low
POROL	portulaca oleracea	common purslane	medium

SUMMARY:

We used treatment #3 (trifluralin 4E at 1quart/A , SOIL INCORPORATED, as the standard to compare the non soil incorporated Anderson treatments against.

Looking at the analysis of variance data at 6, 8, 10 and 12 weeks after treatment, **we can see that the 2 best Anderson treatments (statistically comparable to the soil incorporated standard (Treatment #3) are:**

Treatment	Treatment Name	Formulation	Rate	Application Description	Notes
9	Anderson 11065	10 DF	10 lbs/A	NON- INCORP; WATERED IN	Statistically equal to treatment #3 (soil incorporated standard) in all listed weeds
14	Anderson 11065	10 DF	10 lbs/A	NON-INCORP; NO WATER	Statistically equal to treatment #3 (soil incorporated standard) **except for large crabgrass at 10 and 12 WAT**

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Personnel

Study Director: Doug Doohan and Tim Koch **Title:** Professor, and Research Associate
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu, koch.1@osu.edu
Phone No.: 330-202-3593 **Mobile No.:** 330-466-4023
Investigator: Doug Doohan and Tim Koch **Title:** Professor, and Research Associate
Affiliation: OARDC/ The Ohio State University
Address: 1680 Madison Ave
Location: Wooster, OH, USA
Postal Code: 44691 **E-mail:** doohan.1@osu.edu, koch.1@osu.edu
Phone No.: 330-202-3593 **Mobile No.:** 330-466-4023

Cooperator/Landowner

Cooperator: Bruce Williams **Role:** Farm Manager
Organization: OARDC **Org. Type:** Research
Address 1: 1680 Madison Ave
Phone No.: 330-263-3878
City: Wooster **Fax No.:** 330-263-3685
State/Prov: OH **Mobile No.:** 330-464-0412
Postal Code: 44691 **E-mail:** williams.20@osu.edu
Country: USA United States

Other Personnel

Role	Name
granular applicator	Michael Sword

Crop Description

Seed Bed: COMPAC compacted

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Description

Pest 1 Type: W **Code:** AGRASS spp.
Common Name: annual grasses (various)

Pest 2 Type: W **Code:** AMACH Amaranthus hybridus
Common Name: Smooth pigweed

Pest 3 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** CIRAR Cirsium arvense
Common Name: Canada thistle

Pest 5 Type: W **Code:** DIGSA Digitaria sanguinalis
Common Name: Large crabgrass

Pest 6 Type: W **Code:** ECHSS Echinochloa sp.
Common Name: Barnyardgrass

Pest 7 Type: W **Code:** PANDI Panicum dichotomiflorum
Common Name: Fall panicum

Pest 8 Type: W **Code:** POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed

Pest 9 Type: W **Code:** POROL Portulaca oleracea
Common Name: Common purslane

Site and Design

Plot Width, Unit: 8 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 240 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Field Prep./Maintenance:
Field Maintenance:
5/15/11: Moldboard plowed
5/20/11: Fertilized field using 300#/A 19-19-19
5/30/11: Disced and leveled

Soil Description

Description Name: Unit 1 HCS FIELD 3E
% Sand: 15 **% OM:** 3 **Texture:** SIL silt loam
% Silt: 70 **pH:** 6.9 **Soil Name:** Wooster Silt Loam
% Clay: 15 **CEC:** 8.4 **Fert. Level:** G good
Soil Drainage: G good

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: OARDC **Distance, Unit:** 0.5 MI

Application Description

	A	B	C	D	E	F
Application Date:	6/27/2011	6/27/2011	6/27/2011	6/27/2011	6/30/2011	6/30/2011
Time of Day:	12:15 PM	12:15 PM	2:20 PM	2:20 PM	3 PM	10 AM
Application Method:	SPREAD	SPRAY	SPREAD	SPRAY	SPREAD	SPRAY
Application Timing:	PREINC	PREINC	PREIRR	PREIRR	PRE	PRE
Application Placement:	BROSOI	BROSOI	BROSOI	BROSOI	BROSOI	BROSOI
Applied By:	MIKE SWORD	TIM KOCH	MIKE SWORD	TIM KOCH	MIKE SWORD	TIM KOCH
Air Temperature, Unit:	76.2 F	76.2 F	79.5 F	79.5 F	80.1 F	69.4 F
% Relative Humidity:	64.1	64.1	62.7	62.7	48.3	67.8
Wind Velocity, Unit:	6.70 MPH	6.70 MPH	5.4 MPH	5.4 MPH	1.6 MPH	4.5 MPH
Wind Direction:	SW	SW	SE	SE	SW	SW
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	71.2 F	71.2 F	74.6 F	74.6 F	78.3 F	68.1 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	0	0	0	0	0	0
Next Rain Occurred On:	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011	7/8/2011

Pest Stage At Each Application

	A	B	C	D	E	F
Pest 1 Code, Type, Scale:	AGRASS W	AGRASS W	AGRASS W	AGRASS W	AGRASS W	AGRASS W
Pest 2 Code, Type, Scale:	AMACH W	AMACH W	AMACH W	AMACH W	AMACH W	AMACH W
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W	CHEAL W	CHEAL W	CHEAL W
Pest 4 Code, Type, Scale:	CIRAR W	CIRAR W	CIRAR W	CIRAR W	CIRAR W	CIRAR W
Pest 5 Code, Type, Scale:	DIGSA W	DIGSA W	DIGSA W	DIGSA W	DIGSA W	DIGSA W
Pest 6 Code, Type, Scale:	ECHSS W	ECHSS W	ECHSS W	ECHSS W	ECHSS W	ECHSS W
Pest 7 Code, Type, Scale:	PANDI W	PANDI W	PANDI W	PANDI W	PANDI W	PANDI W
Pest 8 Code, Type, Scale:	POLPY W	POLPY W	POLPY W	POLPY W	POLPY W	POLPY W
Pest 9 Code, Type, Scale:	POROL W	POROL W	POROL W	POROL W	POROL W	POROL W

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Application Equipment

	A	B	C	D	E	F
Appl. Equipment:	Valmar 1255	R& D sprayer	Valmar 1255	R& D sprayer	Valmar 1255	R& D sprayer
Equipment Type:	SPEGRA	BACSPR	SPEGRA	BACSPR	SPEGRA	BACSPR
Operation Pressure, Unit:	30 IN	40 PSI	30 IN	40 PSI	30 IN	40 PSI
Nozzle Type:	Deflector	Turbotwin	Deflector	Turbotwin	Deflector	Turbotwin
Nozzle Size:	3B 4A 7B	TTJ60-110	3B 4A 7B	TTJ60-110	3B 4A 7B	TTJ60-110
Nozzle Spacing, Unit:	16 IN	18 IN	16 IN	18 IN	16 IN	18 IN
Nozzles/Row:	6	4	6	4	6	4
Nozzle Calibration, Unit:	N/A	0.20 GPM	N/A	0.20 GPM	N/A	0.20 GPM
Band Width, Unit:	8 FT	6 FT	8 FT	6 FT	8 FT	6 FT
Boom Length, Unit:	8 FT	6 FT	8 FT	6 FT	8 FT	6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	4 MPH	2.5 MPH	4 MPH	2.5 MPH	4 MPH	2.5 MPH
Carrier:		WATER		WATER		WATER
Spray Volume, Unit:	10 lbs/A	25 GAL/AC	10 lbs/A	25 GAL/AC	10 lbs/A	25 GAL/AC
Mix Size, Unit:	5 lbs	2 liters	5 lbs	2 liters	5 lbs	2 liters
Propellant:	AIRFAN	COMCO2	AIRFAN	COMCO2	AIRFAN	COMCO2

Equipment Comment: Mike Swords applicator was a Valmar 1255, air assissted granular applicator, 16 foot spread, (8 foot spread width used for the trial). Applicator boom deflector nozzles spaced 16" apart.

Trt No	Treatment Application Comment
1	Anderson 11167, Valmar Setting, (Ultra Low 3B); product flowed well in the applicator
6	Anderson 11167, Valmar Setting, (Ultra Low 3B); product flowed well in the applicator
11	Anderson 11167, Valmar Setting, (Ultra Low 3B); product flowed well in the applicator
2	Anderson 10274, Valmar Setting, (Ultra Low 4A); product flowed well in the applicator, some sticking to the metering well
7	Anderson 10274, Valmar Setting, (Ultra Low 4A); product flowed well in the applicator, some sticking to the metering well
12	Anderson 10274, Valmar Setting, (Ultra Low 4A); product flowed well in the applicator, some sticking to the metering well
4	Anderson 11065, Valmar Setting, (Ultra Low 47B; product flowed well in the applicator, product stuck to the metering wheel
9	Anderson 11065, Valmar Setting, (Ultra Low 47B; product flowed well in the applicator, product stuck to the metering wheel
14	Anderson 11065, Valmar Setting, (Ultra Low 47B; product flowed well in the applicator, product stuck to the metering wheel

Date	By	Notes
6/27/2011	Koch, Sword	applied Soil incorporated Treatments 1-5 from 11:30- AM to 12:30 PM, then double disced field to appoximately 1/2 " deep.
6/27/2011	Koch, Sword	applied Non- incorporated Treatments 6-10 from 2:30 to 3:30 PM
6/27/2011	Koch, Sword	Irrigated with overhead irrigation from 3:30 to 5:30 PM approximately 1/2 to 3/4"
6/30/2011	Sword	applied granular treatments #11, #12, #14 from 3-4 PM
6/30/2011	Koch	sprayed treatments #13, and #15 from 10-11 AM

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: A Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
5	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	A B	5.286 g/mx	105	212	316	413
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	A B	15.0 ml/mx				
2	ANDERSON 10274	10	GR	1	lb ai/a	PRE	A B	24.99 g/1 pl	107	206	301	411
4	ANDERSON 11065	10	GR	1	lb ai/a	PRE	A B	24.99 g/1 pl	109	209	302	406
1	ANDERSON 11167	10	G	1	lb ai/a	PRE	A B	24.99 g/1 pl	110	201	314	401
3	TRIFLURALIN	4	EC	1	lb ai/a	PRE	A B	30.0 ml/mx	113	211	305	408

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: B Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
5	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	A B	5.286 g/mx	105	212	316	413
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	A B	15.0 ml/mx				
2	ANDERSON 10274	10	GR	1	lb ai/a	PRE	A B	24.99 g/1 pl	107	206	301	411
4	ANDERSON 11065	10	GR	1	lb ai/a	PRE	A B	24.99 g/1 pl	109	209	302	406
1	ANDERSON 11167	10	G	1	lb ai/a	PRE	A B	24.99 g/1 pl	110	201	314	401
3	TRIFLURALIN	4	EC	1	lb ai/a	PRE	A B	30.0 ml/mx	113	211	305	408

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: C Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
10	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	C D	5.286 g/mx	102	205	311	405
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	C D	15.0 ml/mx				
7	ANDERSON 10274	10	GR	1	lb ai/a	PRE	C D	24.99 g/1 pl	104	202	313	410
9	ANDERSON 11065	10	GR	1	lb ai/a	PRE	C D	24.99 g/1 pl	111	208	310	402
8	TRIFLURALIN	4	EC	1	lb ai/a	PRE	C D	30.0 ml/mx	114	204	306	415
6	ANDERSON 11167	10	G	1	lb ai/a	PRE	C D	24.99 g/1 pl	116	203	312	407

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: D Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
10	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	C D	5.286 g/mx	102	205	311	405
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	C D	15.0 ml/mx				
7	ANDERSON 10274	10	GR	1	lb ai/a	PRE	C D	24.99 g/1 pl	104	202	313	410
9	ANDERSON 11065	10	GR	1	lb ai/a	PRE	C D	24.99 g/1 pl	111	208	310	402
8	TRIFLURALIN	4	EC	1	lb ai/a	PRE	C D	30.0 ml/mx	114	204	306	415
6	ANDERSON 11167	10	G	1	lb ai/a	PRE	C D	24.99 g/1 pl	116	203	312	407

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: E Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
12	ANDERSON 10274	10	GR	1	lb ai/a	PRE	E F	24.99 g/1 pl	103	210	304	409
11	ANDERSON 11167	10	G	1	lb ai/a	PRE	E F	24.99 g/1 pl	106	215	303	414
15	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	E F	5.286 g/mx	108	214	308	412
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	E F	15.0 ml/mx				
14	ANDERSON 11065	10	GR	1	lb ai/a	PRE	E F	24.99 g/1 pl	112	216	309	404
13	TRIFLURALIN	4	EC	1	lb ai/a	PRE	E F	30.0 ml/mx	115	207	315	416

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: F Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
12	ANDERSON 10274	10	GR	1	lb ai/a	PRE	E F	24.99 g/1 pl	103	210	304	409
11	ANDERSON 11167	10	G	1	lb ai/a	PRE	E F	24.99 g/1 pl	106	215	303	414
15	VALOR SX+	51	WG	0.1875	lb ai/a	PRE	E F	5.286 g/mx	108	214	308	412
	TRIFLURALIN	4	EC	0.5	lb ai/a	PRE	E F	15.0 ml/mx				
14	ANDERSON 11065	10	GR	1	lb ai/a	PRE	E F	24.99 g/1 pl	112	216	309	404
13	TRIFLURALIN	4	EC	1	lb ai/a	PRE	E F	30.0 ml/mx	115	207	315	416

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Reps: 4 Appl Code: _ Plots: 8 by 30 feet
Spray vol: 25 gal/ac Mix size: 3 liters (min 2.3985)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Rep 1	2	3	4
16	UNTREATED CONTROL								101	213	307	403

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
749.736	g	ANDERSON 11167	10	G	
749.736	g	ANDERSON 10274	10	GR	
337.463	ml	TRIFLURALIN	4	EC	
749.736	g	ANDERSON 11065	10	GR	
39.648	g	VALOR SX+	51	WG	

* 'Per area' calculations based on 4 replicates of 8 by 30 feet 'Plot' experimental units (area of one treatment).
* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 3 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* Adjusted for multiple applications in treatment list.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Rep	Blk																		
4	4	401	1	402	9	403	16	404	14	405	10	406	4	407	6	408	3	409	12	410	7
3	3	301	2	302	4	303	11	304	12	305	3	306	8	307	16	308	15	309	14	310	9
2	2	201	1	202	7	203	6	204	8	205	10	206	2	207	13	208	9	209	4	210	12
1	1	101	16	102	10	103	12	104	7	105	5	106	11	107	2	108	15	109	4	110	1

Rep	Blk										
4	4	411	2	412	15	413	5	414	11	415	8	416	13
3	3	311	10	312	6	313	7	314	1	315	13	316	5
2	2	211	3	212	5	213	16	214	15	215	11	216	14
1	1	111	9	112	14	113	3	114	8	115	13	116	6

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
	Pest Scientific Name					Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
	Pest Name					annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
	Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0	0
	Days After First/Last Applic.					14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
	Trt-Eval Interval					2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
	Number of Decimals					0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0
					213	0	0	0	0	0	0	0	0
					307	0	0	0	0	0	0	0	0
					403	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0
10	VALOR SX+	0.1875	lb ai/a	C D	102	100	100	100	100	100	100	90	99
	TRIFLURALIN	0.5	lb ai/a	C D	205	100	100	100	100	100	100	95	99
					311	100	100	100	100	100	100	95	99
					405	100	100	100	100	100	100	90	99
					Mean =	100	100	100	100	100	100	93	99
12	ANDERSON 10274	1	lb ai/a	E F	103	95	100	100	100	100	100	80	99
					210	95	90	100	100	100	100	70	70
					304	90	80	80	100	100	100	70	60
					409	95	50	100	100	100	95	50	50
					Mean =	94	80	95	100	100	99	68	70
7	ANDERSON 10274	1	lb ai/a	C D	104	90	90	100	100	100	100	80	80
					202	90	100	100	100	100	0	80	99
					313	90	70	100	100	100	90	70	20
					410	85	0	100	100	100	80	50	0
					Mean =	89	65	100	100	100	68	70	50
5	VALOR SX+	0.1875	lb ai/a	A B	105	100	100	100	100	100	100	95	99
	TRIFLURALIN	0.5	lb ai/a	A B	212	100	100	100	100	100	100	99	99
					316	100	100	100	90	100	100	99	99
					413	100	100	100	100	100	100	95	99
					Mean =	100	100	100	98	100	100	97	99

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
Pest Scientific Name				Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
Pest Name				annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
11	ANDERSON 11167	1	lb ai/a	E F	106	95	100	100	100	100	100	75	90
					215	85	90	100	100	100	100	70	60
					303	90	90	100	100	100	95	80	70
					414	90	90	100	100	100	90	80	80
					Mean =	90	93	100	100	100	96	76	75
2	ANDERSON 10274	1	lb ai/a	A B	107	95	100	100	100	100	100	80	99
					206	90	100	100	100	100	100	75	99
					301	100	100	100	100	100	100	60	99
					411	100	95	100	100	100	100	90	90
					Mean =	96	99	100	100	100	100	76	97
15	VALOR SX+	0.1875	lb ai/a	E F	108	100	100	100	100	100	100	90	99
	TRIFLURALIN	0.5	lb ai/a	E F	214	100	100	100	100	100	100	95	99
					308	100	100	100	100	100	100	99	99
					412	100	100	100	100	100	100	99	99
					Mean =	100	100	100	100	100	100	96	99
4	ANDERSON 11065	1	lb ai/a	A B	109	95	100	100	100	100	95	75	99
					209	95	100	100	100	100	95	80	99
					302	100	100	100	100	100	100	40	99
					406	95	100	100	100	100	100	80	99
					Mean =	96	100	100	100	100	98	69	99
1	ANDERSON 11167	1	lb ai/a	A B	110	100	90	100	90	100	100	80	80
					201	90	100	100	100	100	90	70	99
					314	90	90	100	100	100	100	80	80
					401	90	100	100	100	100	95	70	80
					Mean =	93	95	100	98	100	96	75	85

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
Pest Scientific Name				Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
Pest Name				annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
9	ANDERSON 11065	1	lb ai/a	C D	111	95	100	100	100	100	100	80	99
					208	90	100	100	100	100	100	80	99
					310	85	100	100	100	100	100	90	99
					402	95	100	100	100	100	100	80	99
					Mean =	91	100	100	100	100	100	83	99
14	ANDERSON 11065	1	lb ai/a	E F	112	90	95	100	100	100	100	60	80
					216	90	100	100	50	100	100	70	99
					309	90	100	100	100	100	100	40	99
					404	90	100	100	100	100	100	75	99
					Mean =	90	99	100	88	100	100	61	94
3	TRIFLURALIN	1	lb ai/a	A B	113	100	100	100	100	100	100	90	90
					211	90	100	100	100	100	90	80	80
					305	95	95	100	100	100	100	80	80
					408	95	100	100	100	100	98	80	99
					Mean =	95	99	100	100	100	97	83	87
8	TRIFLURALIN	1	lb ai/a	C D	114	90	90	100	100	100	90	65	50
					204	80	90	100	100	100	90	0	99
					306	80	0	100	100	100	100	90	0
					415	75	50	100	100	100	95	0	0
					Mean =	81	58	100	100	100	94	39	37
13	TRIFLURALIN	1	lb ai/a	E F	115	80	90	100	0	100	100	50	50
					207	90	100	100	100	100	100	75	99
					315	80	50	100	100	100	95	60	20
					416	95	60	100	100	100	100	70	50
					Mean =	86	75	100	75	100	99	64	55

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
Pest Scientific Name				Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
Pest Name				annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4	5	6	7	8
6	ANDERSON 11167	1	lb ai/a	C D	116	90	100	100	0	100	100	70	99
					203	90	100	100	100	100	90	85	99
					312	90	80	100	100	100	90	70	50
					407	85	85	100	100	100	100	90	80
					Mean =	89	91	100	75	100	95	79	82

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Unit	Appl Code	Plot	9	10	11	12	13	14	15
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR
	Pest Scientific Name					Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense
	Pest Name					lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle
	Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name					NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0
	Days After First/Last Applic.					28 25	28 25	28 25	28 25	45 42	45 42	45 42
	Trt-Eval Interval					4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT
	Number of Decimals					0	0	0	0	0	0	0
16	UNTREATED CONTROL				101	0	0	0	0	0	0	0
					213	0	0	0	0	0	0	0
					307	0	0	0	0	0	0	0
					403	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0
10	VALOR SX+	0.1875	lb ai/a	C D	102	99	99	99	99	99	99	99
	TRIFLURALIN	0.5	lb ai/a	C D	205	99	99	99	99	99	99	99
					311	99	99	99	99	99	99	99
					405	99	99	99	99	99	99	99
					Mean =	99	99	99	99	99	99	99
12	ANDERSON 10274	1	lb ai/a	E F	103	80	99	99	80	99	50	99
					210	99	99	99	80	0	99	99
					304	99	99	99	20	70	99	99
					409	99	99	99	50	0	15	99
					Mean =	94	99	99	58	42	66	99
7	ANDERSON 10274	1	lb ai/a	C D	104	90	99	99	90	0	25	99
					202	99	99	99	70	99	99	99
					313	99	99	99	50	0	99	99
					410	99	99	99	0	0	99	99
					Mean =	97	99	99	53	25	81	99
5	VALOR SX+	0.1875	lb ai/a	A B	105	99	99	99	99	99	99	99
	TRIFLURALIN	0.5	lb ai/a	A B	212	99	99	99	99	99	99	95
					316	99	95	99	99	99	99	99
					413	99	99	99	99	99	99	99
					Mean =	99	98	99	99	99	99	98

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							28 25	28 25	28 25	28 25	45 42	45 42	45 42	
Trt-Eval Interval							4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	9	10	11	12	13	14	15		
11	ANDERSON 11167	1	lb ai/a	E F	106	99	99	99	80	60	99	99		
					215	99	99	99	90	40	99	99		
					303	99	99	99	50	80	99	99		
					414	99	99	99	90	20	99	99		
					Mean =	99	99	99	78	50	99	99		
2	ANDERSON 10274	1	lb ai/a	A B	107	99	99	99	90	99	99	99		
					206	99	99	99	99	99	99	99		
					301	99	99	99	90	99	99	99		
					411	99	99	99	90	80	99	99		
					Mean =	99	99	99	92	94	99	99		
15	VALOR SX+	0.1875	lb ai/a	E F	108	99	99	99	99	99	99	99		
	TRIFLURALIN	0.5	lb ai/a	E F	214	99	99	99	99	99	99	99		
					308	99	99	99	99	99	99	99		
					412	99	99	99	99	99	99	99		
					Mean =	99	99	99	99	99	99	99		
4	ANDERSON 11065	1	lb ai/a	A B	109	99	99	99	99	99	99	99		
					209	99	99	99	85	99	99	99		
					302	99	99	99	95	99	99	99		
					406	99	99	99	90	99	99	99		
					Mean =	99	99	99	92	99	99	99		
1	ANDERSON 11167	1	lb ai/a	A B	110	99	70	99	99	0	99	0		
					201	99	99	99	70	99	99	99		
					314	99	99	80	80	99	99	99		
					401	99	30	99	60	0	99	85		
					Mean =	99	75	94	77	50	99	71		

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							28 25	28 25	28 25	28 25	45 42	45 42	45 42	
Trt-Eval Interval							4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	9	10	11	12	13	14	15		
9	ANDERSON 11065	1	lb ai/a	C D	111	99	90	99	99	99	99	60		
					208	99	99	99	99	99	99	99		
					310	99	99	99	99	99	99	99		
					402	99	99	99	99	90	99	15		
					Mean =	99	97	99	99	97	99	68		
14	ANDERSON 11065	1	lb ai/a	E F	112	99	99	99	99	85	99	99		
					216	99	80	99	99	99	99	70		
					309	99	99	99	99	99	99	99		
					404	99	99	99	99	99	99	0		
					Mean =	99	94	99	99	96	99	67		
3	TRIFLURALIN	1	lb ai/a	A B	113	99	99	99	99	70	99	99		
					211	99	99	99	70	20	99	99		
					305	99	99	99	80	85	99	99		
					408	99	99	99	90	90	99	99		
					Mean =	99	99	99	85	66	99	99		
8	TRIFLURALIN	1	lb ai/a	C D	114	99	90	99	60	25	99	99		
					204	0	99	0	0	0	0	99		
					306	99	99	99	80	0	99	99		
					415	99	99	99	0	0	99	95		
					Mean =	74	97	74	35	6	74	98		
13	TRIFLURALIN	1	lb ai/a	E F	115	99	30	99	50	99	99	0		
					207	99	99	99	80	99	99	99		
					315	99	99	99	50	0	99	99		
					416	99	99	99	50	50	99	99		
					Mean =	99	82	99	58	62	99	74		

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							28 25	28 25	28 25	28 25	45 42	45 42	45 42	
Trt-Eval Interval							4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		9	10	11	12	13	14	15	
6	ANDERSON 11167	1	lb ai/a	C D	116		99	0	99	50	99	99	0	
					203		99	99	99	70	99	99	99	
					312		99	99	99	50	0	0	99	
					407		99	99	99	70	15	99	99	
						Mean =	99	74	99	60	53	74	74	

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Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
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Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	16	17	18	19	20	21	22	23
	Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code					DIGSA	ECHCG	POROL	POLPY	AMACH	CHEAL	CIRAR	DIGSA
	Pest Scientific Name					Digitaria sang>	Echinochloa cr>	Portulaca oler>	Persicaria pen>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>
	Pest Name					L.crabgrass	barnyardgrass	purslane	P.smartweed	S.pigweed	lambsquarters	C. thistle	L.crabgrass
	Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date					8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011
	Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit					%	%	%	%	%	%	%	%
	Number of Subsamples					0	0	0	0	0	0	0	0
	Days After First/Last Applic.					45 42	45 42	45 42	45 42	56 53	56 53	56 53	56 53
	Trt-Eval Interval					6WAT	6WAT	6WAT	6WAT	8WAT	8WAT	8WAT	8WAT
	Number of Decimals					0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				101	0	0	0	0	0	0	0	0
					213	0	0	0	0	0	0	0	0
					307	0	0	0	0	0	0	0	0
					403	0	0	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0	0	0
10	VALOR SX+	0.1875	lb ai/a	C D	102	98	98	20	99	99	99	99	90
	TRIFLURALIN	0.5	lb ai/a	C D	205	95	99	99	99	99	99	99	99
					311	98	95	99	99	99	99	99	90
					405	90	98	99	99	99	99	99	95
					Mean =	95	98	79	99	99	99	99	94
12	ANDERSON 10274	1	lb ai/a	E F	103	85	99	20	99	99	40	99	80
					210	0	80	75	95	0	0	99	75
					304	75	70	0	99	50	99	99	80
					409	95	75	0	0	0	0	0	50
					Mean =	64	81	24	73	37	35	74	71
7	ANDERSON 10274	1	lb ai/a	C D	104	0	0	20	99	0	99	99	0
					202	70	70	0	99	99	99	99	80
					313	80	80	10	99	0	99	0	85
					410	85	85	0	99	0	15	99	80
					Mean =	59	59	8	99	25	78	74	61
5	VALOR SX+	0.1875	lb ai/a	A B	105	95	98	99	99	99	99	99	95
	TRIFLURALIN	0.5	lb ai/a	A B	212	95	99	99	99	99	99	99	95
					316	99	99	99	99	99	99	99	99
					413	95	85	99	99	99	99	99	95
					Mean =	96	95	99	99	99	99	99	96

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Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				DIGSA	ECHCG	POROL	POLPY	AMACH	CHEAL	CIRAR	DIGSA
Pest Scientific Name				Digitaria sang>	Echinochloa cr>	Portulaca oler>	Persicaria pen>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>
Pest Name				L.crabgrass	barnyardgrass	purslane	P.smartweed	S.pigweed	lambsquarters	C. thistle	L.crabgrass
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				45 42	45 42	45 42	45 42	56 53	56 53	56 53	56 53
Trt-Eval Interval				6WAT	6WAT	6WAT	6WAT	8WAT	8WAT	8WAT	8WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	16	17	18	19	20	21	22	23
6	ANDERSON 11167	1	lb ai/a	C D	116	0	0	70	99	90	99	0	60
					203	75	80	75	99	99	99	99	80
					312	0	0	0	99	0	0	99	80
					407	0	75	0	99	30	99	99	0
					Mean =	19	39	36	99	55	74	74	55

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							8/22/2011	8/22/2011	8/22/2011	8/22/2011	9/5/2011	9/5/2011	9/5/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							56 53	56 53	56 53	56 53	70 67	70 67	70 67	
Trt-Eval Interval							8WAT	8WAT	8WAT	8WAT	10WAT	10WAT	10WAT	
Number of Decimals							0		0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	24	25	26	27	28	29	30		
11	ANDERSON 11167	1	lb ai/a	E F	106	60	85.0	99	60	0	99	99		
					215	99	70.0	99	60	50	60	50		
					303	50	75.0	99	0	0	99	99		
					414	90	90.0	99	20	50	99	99		
					Mean =	75	80.0	99	35	25	89	87		
2	ANDERSON 10274	1	lb ai/a	A B	107	80	80.0	99	99	99	99	99		
					206	30	99.0	99	99	99	99	99		
					301	99	75.0	99	99	99	99	99		
					411	99	95.0	99	0	70	99	99		
					Mean =	77	87.3	99	74	92	99	99		
15	VALOR SX+	0.1875	lb ai/a	E F	108	99	90.0	99	99	99	99	99		
	TRIFLURALIN	0.5	lb ai/a	E F	214	99	80.0	99	99	99	99	99		
					308	95	90.0	99	99	99	99	99		
					412	99	99.0	99	99	99	99	99		
					Mean =	98	89.8	99	99	99	99	99		
4	ANDERSON 11065	1	lb ai/a	A B	109	99	55.0	99	99	99	99	99		
					209	99	25.0	99	80	99	99	99		
					302	85	80.0	99	99	99	99	99		
					406	95	95.0	99	99	99	60	99		
					Mean =	95	63.8	99	94	99	89	99		
1	ANDERSON 11167	1	lb ai/a	A B	110	99	99.0	99	99	0	99	0		
					201	90	90.0	99	0	99	99	99		
					314	99	90.0	99	70	85	99	99		
					401	99	99.0	99	0	0	99	0		
					Mean =	97	94.5	99	42	46	99	50		

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Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							8/22/2011	8/22/2011	8/22/2011	8/22/2011	9/5/2011	9/5/2011	9/5/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							56 53	56 53	56 53	56 53	70 67	70 67	70 67	
Trt-Eval Interval							8WAT	8WAT	8WAT	8WAT	10WAT	10WAT	10WAT	
Number of Decimals							0		0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	24	25	26	27	28	29	30		
9	ANDERSON 11065	1	lb ai/a	C D	111	99	85.0	99	99	99	99	50		
					208	70	90.0	99	99	99	99	99		
					310	99	80.0	99	99	99	95	99		
					402	99	80.0	99	99	99	99	99		
					Mean =	92	83.8	99	99	99	98	87		
14	ANDERSON 11065	1	lb ai/a	E F	112	99	80.0	99	99	70	99	99		
					216	99	95.0	99	99	99	99	50		
					309	75	75.0	99	99	99	99	99		
					404	80	80.0	99	99	99	99	99		
					Mean =	88	82.5	99	99	92	99	87		
3	TRIFLURALIN	1	lb ai/a	A B	113	99	90.0	99	99	70	99	99		
					211	99	85.0	99	75	0	99	99		
					305	80	85.0	99	90	0	99	99		
					408	99	99.0	99	99	90	99	99		
					Mean =	94	89.8	99	91	40	99	99		
8	TRIFLURALIN	1	lb ai/a	C D	114	99	20.0	99	0	0	99	99		
					204	0	50.0	99	0	99	0	99		
					306	0	75.0	99	60	0	99	99		
					415	40	60.0	99	0	0	99	99		
					Mean =	35	51.3	99	15	25	74	99		
13	TRIFLURALIN	1	lb ai/a	E F	115	0	0.0	99	40	70	99	0		
					207	99	90.0	99	0	70	99	99		
					315	0	0.0	99	0	0	99	99		
					416	60	80.0	99	0	0	99	99		
					Mean =	40	42.5	99	10	35	99	74		

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Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	
Pest Scientific Name							Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	
Pest Name							barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							8/22/2011	8/22/2011	8/22/2011	8/22/2011	9/5/2011	9/5/2011	9/5/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							56 53	56 53	56 53	56 53	70 67	70 67	70 67	
Trt-Eval Interval							8WAT	8WAT	8WAT	8WAT	10WAT	10WAT	10WAT	
Number of Decimals							0		0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		24	25	26	27	28	29	30	
6	ANDERSON 11167	1	lb ai/a	C D	116		0	90.0	99	60	99	99	0	
					203		85	75.0	99	70	99	99	99	
					312		0	80.0	99	0	0	0	99	
					407		99	95.0	99	0	0	0	99	
						Mean =	46	85.0	99	33	50	50	74	

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Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
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Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code							DIGSA	ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	
Pest Scientific Name							Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	
Pest Name							L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							9/5/2011	9/5/2011	8/22/2011	9/5/2011	9/5/2011	9/19/2011	9/19/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							70 67	70 67	56 53	70 67	70 67	84 81	84 81	
Trt-Eval Interval							10WAT	10WAT	10WAT	10WAT	10WAT	12WAT	12WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		31	32	33	34	35	36	37	
16	UNTREATED CONTROL				101		0	0	0	0	0	0	0	
					213		0	0	0	0	0	0	0	
					307		0	0	0	0	0	0	0	
					403		0	0	0	0	0	0	0	
						Mean =	0	0	0	0	0	0	0	
10	VALOR SX+	0.1875	lb ai/a	C D	102		99	99	85	99	99	99	99	
	TRIFLURALIN	0.5	lb ai/a	C D	205		95	90	90	99	99	99	99	
					311		85	80	99	99	99	99	99	
					405		90	90	95	99	99	99	99	
						Mean =	92	90	92	99	99	99	99	
12	ANDERSON 10274	1	lb ai/a	E F	103		90	0	75	0	0	50	0	
					210		80	99	0	0	0	0	0	
					304		99	85	0	0	0	40	99	
					409		0	0	0	0	0	0	99	
						Mean =	67	46	19	0	0	23	50	
7	ANDERSON 10274	1	lb ai/a	C D	104		0	0	85	99	99	0	0	
					202		70	0	0	99	99	99	99	
					313		80	99	70	99	99	0	99	
					410		85	99	0	99	99	0	0	
						Mean =	59	50	39	99	99	25	50	
5	VALOR SX+	0.1875	lb ai/a	A B	105		99	99	90	99	99	99	99	
	TRIFLURALIN	0.5	lb ai/a	A B	212		95	99	99	99	99	99	99	
					316		99	99	99	99	99	99	99	
					413		90	99	99	99	99	99	99	
						Mean =	96	99	97	99	99	99	99	

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Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
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Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							DIGSA	ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	
Pest Scientific Name							Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	
Pest Name							L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							9/5/2011	9/5/2011	8/22/2011	9/5/2011	9/5/2011	9/19/2011	9/19/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							70 67	70 67	56 53	70 67	70 67	84 81	84 81	
Trt-Eval Interval							10WAT	10WAT	10WAT	10WAT	10WAT	12WAT	12WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		31	32	33	34	35	36	37	
9	ANDERSON 11065	1	lb ai/a	C D	111		85	99	85	99	99	99	99	
					208		85	0	99	99	99	99	99	
					310		70	99	70	99	99	99	99	
					402		99	99	50	99	99	99	99	
						Mean =	85	74	76	99	99	99	99	
14	ANDERSON 11065	1	lb ai/a	E F	112		65	99	90	99	99	50	99	
					216		0	99	90	99	99	99	99	
					309		85	0	0	99	99	99	99	
					404		0	0	0	99	99	99	99	
						Mean =	38	50	45	99	99	87	99	
3	TRIFLURALIN	1	lb ai/a	A B	113		90	99	90	99	99	70	99	
					211		85	99	80	99	99	25	99	
					305		99	75	99	0	99	30	99	
					408		85	99	90	99	99	70	99	
						Mean =	90	93	90	74	99	49	99	
8	TRIFLURALIN	1	lb ai/a	C D	114		0	99	0	99	99	0	99	
					204		70	0	99	0	99	99	0	
					306		80	0	0	99	99	0	99	
					415		70	99	0	99	99	0	99	
						Mean =	55	50	25	74	99	25	74	
13	TRIFLURALIN	1	lb ai/a	E F	115		99	99	0	99	99	0	99	
					207		50	99	50	99	99	99	99	
					315		75	99	0	99	99	0	99	
					416		70	99	0	99	99	0	99	
						Mean =	74	99	13	99	99	25	99	

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type							W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code							DIGSA	ECHCG	PANDI	POLPY	POROL	AMACH	CHEAL	
Pest Scientific Name							Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	
Pest Name							L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	
Crop Code							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name							NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated							WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date							9/5/2011	9/5/2011	8/22/2011	9/5/2011	9/5/2011	9/19/2011	9/19/2011	
Rating Type							CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit							%	%	%	%	%	%	%	
Number of Subsamples							0	0	0	0	0	0	0	
Days After First/Last Applic.							70 67	70 67	56 53	70 67	70 67	84 81	84 81	
Trt-Eval Interval							10WAT	10WAT	10WAT	10WAT	10WAT	12WAT	12WAT	
Number of Decimals							0	0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot		31	32	33	34	35	36	37	
6	ANDERSON 11167	1	lb ai/a	C D	116		0	99	90	99	99	99	99	
					203		75	60	75	99	99	99	99	
					312		0	70	70	99	99	50	0	
					407		0	99	0	99	99	50	99	
						Mean =	19	82	59	99	99	75	74	

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code						CIRAR	DIGSA	ECHCG	PANDI	POLPY	POROL
Pest Scientific Name						Cirsium arvense	Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>
Pest Name						C. thistle	L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane
Crop Code						NONE	NONE	NONE	NONE	NONE	NONE
Crop Name						NONE	NONE	NONE	NONE	NONE	NONE
Part Rated						WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date						9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011
Rating Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%
Number of Subsamples						0	0	0	0	0	0
Days After First/Last Applic.						84 81	84 81	84 81	84 81	84 81	84 81
Trt-Eval Interval						12WAT	12WAT	12WAT	12WAT	12WAT	12WAT
Number of Decimals						0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	38	39	40	41	42	43
16	UNTREATED CONTROL				101	0	0	0	0	0	0
					213	0	0	0	0	0	0
					307	0	0	0	0	0	0
					403	0	0	0	0	0	0
					Mean =	0	0	0	0	0	0
10	VALOR SX+	0.1875	lb ai/a	C D	102	99	90	99	85	99	99
	TRIFLURALIN	0.5	lb ai/a	C D	205	99	99	80	90	99	99
					311	99	85	99	85	99	99
					405	99	70	80	90	99	99
					Mean =	99	86	90	88	99	99
12	ANDERSON 10274	1	lb ai/a	E F	103	99	90	99	99	99	99
					210	99	70	99	60	0	0
					304	99	99	99	0	99	99
					409	99	99	85	0	0	99
					Mean =	99	90	96	40	50	74
7	ANDERSON 10274	1	lb ai/a	C D	104	99	50	0	50	99	99
					202	99	85	80	70	99	99
					313	99	99	99	70	99	99
					410	99	99	99	0	99	99
					Mean =	99	83	70	48	99	99
5	VALOR SX+	0.1875	lb ai/a	A B	105	99	95	85	85	99	99
	TRIFLURALIN	0.5	lb ai/a	A B	212	99	95	99	99	99	99
					316	50	99	99	99	99	99
					413	99	95	99	99	99	99
					Mean =	87	96	96	96	99	99

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code						CIRAR	DIGSA	ECHCG	PANDI	POLPY	POROL
Pest Scientific Name						Cirsium arvense	Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>
Pest Name						C. thistle	L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane
Crop Code						NONE	NONE	NONE	NONE	NONE	NONE
Crop Name						NONE	NONE	NONE	NONE	NONE	NONE
Part Rated						WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date						9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011
Rating Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%
Number of Subsamples						0	0	0	0	0	0
Days After First/Last Applic.						84 81	84 81	84 81	84 81	84 81	84 81
Trt-Eval Interval						12WAT	12WAT	12WAT	12WAT	12WAT	12WAT
Number of Decimals						0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	38	39	40	41	42	43
11	ANDERSON 11167	1	lb ai/a	E F	106	99	0	0	70	0	99
					215	99	90	99	0	99	99
					303	99	99	0	0	99	99
					414	99	70	0	0	0	99
					Mean =	99	65	25	18	50	99
2	ANDERSON 10274	1	lb ai/a	A B	107	99	70	75	75	99	99
					206	99	99	0	99	99	99
					301	99	65	0	0	99	99
					411	99	75	99	80	99	99
					Mean =	99	77	44	64	99	99
15	VALOR SX+	0.1875	lb ai/a	E F	108	99	85	99	85	99	99
	TRIFLURALIN	0.5	lb ai/a	E F	214	99	90	99	75	99	99
					308	99	75	99	85	99	99
					412	99	90	99	99	99	99
					Mean =	99	85	99	86	99	99
4	ANDERSON 11065	1	lb ai/a	A B	109	99	99	99	40	99	99
					209	99	85	99	50	99	99
					302	99	85	70	50	99	99
					406	99	60	85	90	99	99
					Mean =	99	82	88	58	99	99
1	ANDERSON 11167	1	lb ai/a	A B	110	99	85	99	85	99	99
					201	99	50	80	80	99	99
					314	99	80	99	80	99	99
					401	99	90	99	90	99	99
					Mean =	99	76	94	84	99	99

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TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code						CIRAR	DIGSA	ECHCG	PANDI	POLPY	POROL
Pest Scientific Name						Cirsium arvense	Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>
Pest Name						C. thistle	L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane
Crop Code						NONE	NONE	NONE	NONE	NONE	NONE
Crop Name						NONE	NONE	NONE	NONE	NONE	NONE
Part Rated						WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date						9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011
Rating Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%	%
Number of Subsamples						0	0	0	0	0	0
Days After First/Last Applic.						84 81	84 81	84 81	84 81	84 81	84 81
Trt-Eval Interval						12WAT	12WAT	12WAT	12WAT	12WAT	12WAT
Number of Decimals						0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	38	39	40	41	42	43
9	ANDERSON 11065	1	lb ai/a	C D	111	50	80	99	85	99	99
					208	99	75	40	85	99	99
					310	99	70	99	75	99	99
					402	99	99	99	30	99	99
					Mean =	87	81	84	69	99	99
14	ANDERSON 11065	1	lb ai/a	E F	112	99	0	99	85	99	99
					216	99	0	99	85	99	99
					309	99	99	60	50	99	99
					404	99	0	70	0	99	99
					Mean =	99	25	82	55	99	99
3	TRIFLURALIN	1	lb ai/a	A B	113	99	90	99	90	99	99
					211	99	85	99	85	99	99
					305	99	99	30	85	99	99
					408	99	90	99	95	99	99
					Mean =	99	91	82	89	99	99
8	TRIFLURALIN	1	lb ai/a	C D	114	99	70	99	0	99	99
					204	99	99	0	99	0	99
					306	99	99	99	0	99	99
					415	99	99	99	75	99	99
					Mean =	99	92	74	44	74	99
13	TRIFLURALIN	1	lb ai/a	E F	115	99	99	99	0	99	99
					207	99	60	99	60	99	99
					315	99	99	0	0	99	99
					416	99	70	85	60	99	99
					Mean =	99	82	71	30	99	99

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code						CIRAR	DIGSA	ECHCG	PANDI	POLPY	POROL	
Pest Scientific Name						Cirsium arvense	Digitaria sang>	Echinochloa cr>	Panicum dichot>	Persicaria pen>	Portulaca oler>	
Pest Name						C. thistle	L.crabgrass	barnyardgrass	F.panicum	P.smartweed	purslane	
Crop Code						NONE	NONE	NONE	NONE	NONE	NONE	
Crop Name						NONE	NONE	NONE	NONE	NONE	NONE	
Part Rated						WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	
Rating Date						9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	
Rating Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit						%	%	%	%	%	%	
Number of Subsamples						0	0	0	0	0	0	
Days After First/Last Applic.						84 81	84 81	84 81	84 81	84 81	84 81	
Trt-Eval Interval						12WAT	12WAT	12WAT	12WAT	12WAT	12WAT	
Number of Decimals						0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	38	39	40	41	42	43	
6	ANDERSON 11167	1	lb ai/a	C D	116	99	0	99	90	99	99	
					203	99	85	80	90	99	99	
					312	99	60	85	70	99	99	
					407	99	0	99	0	99	99	
					Mean =	99	36	91	63	99	99	

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID:
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
AMACH, Amaranthus hybridus, = US
CHEAL, Chenopodium album, = US
CIRAR, Cirsium arvense, = US
POLPY, Persicaria pensylvanica, = US
POROL, Portulaca oleracea, = US
DIGSA, Digitaria sanguinalis, = US
ECHCG, Echinochloa crus-galli, = US
PANDI, Panicum dichotomiflorum, = US
Rating Unit
% = percent

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
	Pest Scientific Name				Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
	Pest Name				annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
	Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
	Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
	Number of Decimals				0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				0 e	0 c	0 b	0 b	0 b	0 c	0 c	0 d
10	VALOR SX+	0.1875	lb ai/a	C D	100 a	100 a	100 a	100 a	100 a	100 a	93 a	99 a
	TRIFLURALIN	0.5	lb ai/a	C D								
12	ANDERSON 10274	1	lb ai/a	E F	94 abc	80 ab	95 a	100 a	100 a	99 a	68 ab	70 abc
7	ANDERSON 10274	1	lb ai/a	C D	89 bc	65 ab	100 a	100 a	100 a	68 b	70 ab	50 bc
5	VALOR SX+	0.1875	lb ai/a	A B	100 a	100 a	100 a	98 a	100 a	100 a	97 a	99 a
	TRIFLURALIN	0.5	lb ai/a	A B								
11	ANDERSON 11167	1	lb ai/a	E F	90 bc	93 a	100 a	100 a	100 a	96 a	76 a	75 abc
2	ANDERSON 10274	1	lb ai/a	A B	96 ab	99 a	100 a	100 a	100 a	100 a	76 a	97 a
15	VALOR SX+	0.1875	lb ai/a	E F	100 a	100 a	100 a	100 a	100 a	100 a	96 a	99 a
	TRIFLURALIN	0.5	lb ai/a	E F								
4	ANDERSON 11065	1	lb ai/a	A B	96 ab	100 a	100 a	100 a	100 a	98 a	69 ab	99 a
1	ANDERSON 11167	1	lb ai/a	A B	93 abc	95 a	100 a	98 a	100 a	96 a	75 a	85 ab
9	ANDERSON 11065	1	lb ai/a	C D	91 bc	100 a	100 a	100 a	100 a	100 a	83 a	99 a
14	ANDERSON 11065	1	lb ai/a	E F	90 bc	99 a	100 a	88 a	100 a	100 a	61 ab	94 a
3	TRIFLURALIN	1	lb ai/a	A B	95 ab	99 a	100 a	100 a	100 a	97 a	83 a	87 ab
8	TRIFLURALIN	1	lb ai/a	C D	81 d	58 b	100 a	100 a	100 a	94 a	39 b	37 c
13	TRIFLURALIN	1	lb ai/a	E F	86 cd	75 ab	100 a	75 a	100 a	99 a	64 ab	55 abc

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				AGRASS	AMACH	CHEAL	CIRAR	POLPY	POROL	AGRASS	AMACH
Pest Scientific Name				Aganope sp.	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Aganope sp.	Amaranthus hyb>
Pest Name				annual grass	S.pigweed	lambsquarters	C.thistle	P.smartweed	purslane	annual grass	S.pigweed
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/11/2011	7/25/2011	7/25/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				14 11	14 11	14 11	14 11	14 11	14 11	28 25	28 25
Trt-Eval Interval				2WAT	2WAT	2WAT	2WAT	2WAT	2WAT	4WAT	4WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7	8
6	ANDERSON 11167	1	lb ai/a	C D	89 bc	91 a	100 a	75 a	100 a	95 a	79 a	82 ab
LSD (P=.05)					5.3	23.5	3.6	26.3	0.0	16.6	22.0	27.4
Standard Deviation					3.7	16.4	2.5	18.4	0.0	11.6	15.4	19.2
CV					4.26	19.46	2.68	20.56	0.0	12.89	21.88	25.0
Bartlett's X2					8.512	49.948	0.0	19.302	0.0	57.042	50.266	25.674
P(Bartlett's X2)					0.579	0.001*	.	0.001*	.	0.001*	0.001*	0.002*
Replicate F					1.447	3.760	1.000	1.751	0.000	1.594	0.166	4.028
Replicate Prob(F)					0.2418	0.0171	0.4016	0.1701	1.0000	0.2040	0.9184	0.0127
Treatment F					164.954	10.242	398.333	7.608	0.000	18.952	9.422	8.786
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12	13	14	15	16
Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code					CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA
Pest Scientific Name					Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>
Pest Name					lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle	L.crabgrass
Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date					7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%
Number of Subsamples					0	0	0	0	0	0	0	0
Days After First/Last Applic.					28 25	28 25	28 25	28 25	45 42	45 42	45 42	45 42
Trt-Eval Interval					4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT	6WAT
Number of Decimals					0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				0 b	0 b	0 b	0 d	0 b	0 b	0 b	0 c
10	VALOR SX+	0.1875	lb ai/a	C D	99 a	99 a	99 a	99 a	99 a	99 a	99 a	95 a
	TRIFLURALIN	0.5	lb ai/a	C D								
12	ANDERSON 10274	1	lb ai/a	E F	94 a	99 a	99 a	58 abc	42 ab	66 a	99 a	64 ab
7	ANDERSON 10274	1	lb ai/a	C D	97 a	99 a	99 a	53 bc	25 ab	81 a	99 a	59 ab
5	VALOR SX+	0.1875	lb ai/a	A B	99 a	98 a	99 a	99 a	99 a	99 a	98 a	96 a
	TRIFLURALIN	0.5	lb ai/a	A B								
11	ANDERSON 11167	1	lb ai/a	E F	99 a	99 a	99 a	78 ab	50 ab	99 a	99 a	59 ab
2	ANDERSON 10274	1	lb ai/a	A B	99 a	99 a	99 a	92 ab	94 a	99 a	99 a	80 ab
15	VALOR SX+	0.1875	lb ai/a	E F	99 a	99 a	99 a	99 a	99 a	99 a	99 a	94 a
	TRIFLURALIN	0.5	lb ai/a	E F								
4	ANDERSON 11065	1	lb ai/a	A B	99 a	99 a	99 a	92 ab	99 a	99 a	99 a	84 a
1	ANDERSON 11167	1	lb ai/a	A B	99 a	75 a	94 a	77 ab	50 ab	99 a	71 a	64 ab
9	ANDERSON 11065	1	lb ai/a	C D	99 a	97 a	99 a	99 a	97 a	99 a	68 a	83 a
14	ANDERSON 11065	1	lb ai/a	E F	99 a	94 a	99 a	99 a	96 a	99 a	67 a	51 ab
3	TRIFLURALIN	1	lb ai/a	A B	99 a	99 a	99 a	85 ab	66 ab	99 a	99 a	86 a
8	TRIFLURALIN	1	lb ai/a	C D	74 a	97 a	74 a	35 c	6 b	74 a	98 a	57 ab
13	TRIFLURALIN	1	lb ai/a	E F	99 a	82 a	99 a	58 abc	62 ab	99 a	74 a	72 ab

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				CHEAL	CIRAR	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA
Pest Scientific Name				Chenopodium al>	Cirsium arvense	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>
Pest Name				lambsquarters	C.thistle	P.smartweed	purslane	S.pigweed	lambsquarters	C.thistle	L.crabgrass
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				7/25/2011	7/25/2011	7/25/2011	7/25/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				28 25	28 25	28 25	28 25	45 42	45 42	45 42	45 42
Trt-Eval Interval				4WAT	4WAT	4WAT	4WAT	6WAT	6WAT	6WAT	6WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12	13	14	15	16
6	ANDERSON 11167	1	lb ai/a	C D	99 a	74 a	99 a	60 abc	53 ab	74 a	74 a	19 bc
LSD (P=.05)					18.2	24.1	18.1	25.4	43.7	32.9	35.8	38.5
Standard Deviation					12.7	16.9	12.7	17.7	30.6	23.0	25.1	27.0
CV					14.0	19.15	13.91	24.03	47.24	26.59	29.89	40.6
Bartlett's X2					14.532	34.395	5.901	21.437	28.856	0.357	29.549	58.699
P(Bartlett's X2)					0.001*	0.001*	0.015*	0.011*	0.001*	0.949	0.001*	0.001*
Replicate F					0.845	2.038	0.869	1.588	1.340	0.031	2.424	1.906
Replicate Prob(F)					0.4767	0.1220	0.4640	0.2056	0.2732	0.9926	0.0781	0.1422
Treatment F					15.465	8.834	15.665	10.269	5.078	5.027	4.304	3.958
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	17	18	19	20	21	22	23	24
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				ECHCG	POROL	POLPY	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
	Pest Scientific Name				Echinochloa cr>	Portulaca oler>	Persicaria pen>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
	Pest Name				barnyardgrass	purslane	P.smartweed	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
	Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				45 42	45 42	45 42	56 53	56 53	56 53	56 53	56 53
	Trt-Eval Interval				6WAT	6WAT	6WAT	8WAT	8WAT	8WAT	8WAT	8WAT
	Number of Decimals				0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				0 d	0 d	0 b	0 b	0 c	0 b	0 c	0 b
10	VALOR SX+	0.1875	lb ai/a	C D	98 a	79 ab	99 a	99 a	99 a	99 a	94 a	91 a
	TRIFLURALIN	0.5	lb ai/a	C D								
12	ANDERSON 10274	1	lb ai/a	E F	81 a	24 bcd	73 a	37 ab	35 b	74 a	71 ab	86 a
7	ANDERSON 10274	1	lb ai/a	C D	59 abc	8 d	99 a	25 b	78 ab	74 a	61 ab	57 a
5	VALOR SX+	0.1875	lb ai/a	A B	95 a	99 a	99 a	99 a	99 a	99 a	96 a	96 a
	TRIFLURALIN	0.5	lb ai/a	A B								
11	ANDERSON 11167	1	lb ai/a	E F	76 ab	35 a-d	96 a	51 ab	77 ab	99 a	82 ab	75 a
2	ANDERSON 10274	1	lb ai/a	A B	83 a	71 abc	99 a	94 a	99 a	99 a	81 ab	77 a
15	VALOR SX+	0.1875	lb ai/a	E F	89 a	99 a	99 a	99 a	99 a	99 a	92 a	98 a
	TRIFLURALIN	0.5	lb ai/a	E F								
4	ANDERSON 11065	1	lb ai/a	A B	79 ab	96 a	99 a	99 a	99 a	99 a	84 ab	95 a
1	ANDERSON 11167	1	lb ai/a	A B	85 a	46 a-d	99 a	47 ab	99 a	74 a	81 ab	97 a
9	ANDERSON 11065	1	lb ai/a	C D	85 a	99 a	99 a	99 a	99 a	94 a	83 ab	92 a
14	ANDERSON 11065	1	lb ai/a	E F	90 a	97 a	99 a	94 a	99 a	74 a	79 ab	88 a
3	TRIFLURALIN	1	lb ai/a	A B	89 a	84 ab	99 a	65 ab	99 a	99 a	88 ab	94 a
8	TRIFLURALIN	1	lb ai/a	C D	23 cd	15 cd	99 a	5 b	99 a	97 a	48 ab	35 ab
13	TRIFLURALIN	1	lb ai/a	E F	59 abc	16 cd	99 a	43 ab	99 a	74 a	38 b	40 ab

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				ECHCG	POROL	POLPY	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
Pest Scientific Name				Echinochloa cr>	Portulaca oler>	Persicaria pen>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
Pest Name				barnyardgrass	purslane	P.smartweed	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				45 42	45 42	45 42	56 53	56 53	56 53	56 53	56 53
Trt-Eval Interval				6WAT	6WAT	6WAT	8WAT	8WAT	8WAT	8WAT	8WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	17	18	19	20	21	22	23	24
6	ANDERSON 11167	1	lb ai/a	C D	39 bc	36 a-d	99 a	55 ab	74 ab	74 a	55 ab	46 ab
LSD (P=.05)					28.5	39.2	17.4	41.3	33.3	44.5	29.9	39.1
Standard Deviation					19.9	27.4	12.2	28.9	23.3	31.1	20.9	27.4
CV					28.32	48.65	13.41	45.74	27.54	37.48	29.54	37.61
Bartlett's X2					48.192	26.962	10.401	18.476	0.086	16.656	71.831	52.127
P(Bartlett's X2)					0.001*	0.005*	0.001*	0.03*	0.993	0.02*	0.001*	0.001*
Replicate F					2.134	1.429	1.166	1.262	0.467	0.275	2.286	0.902
Replicate Prob(F)					0.1092	0.2467	0.3332	0.2988	0.7067	0.8428	0.0916	0.4478
Treatment F					7.843	7.440	16.930	5.990	5.970	2.600	5.873	4.470
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	0.0068	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	25	26	27	28	29	30	31	32
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
	Pest Scientific Name				Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
	Pest Name				F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
	Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
	Rating Date				8/22/2011	8/22/2011	8/22/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011
	Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%	%	%	%
	Number of Subsamples				0	0	0	0	0	0	0	0
	Days After First/Last Applic.				56 53	56 53	56 53	70 67	70 67	70 67	70 67	70 67
	Trt-Eval Interval				8WAT	8WAT	8WAT	10WAT	10WAT	10WAT	10WAT	10WAT
	Number of Decimals					0	0	0	0	0	0	0
16	UNTREATED CONTROL				0.0 c	0 b	0 c	0 b	0 b	0 b	0 c	0 b
10	VALOR SX+	0.1875	lb ai/a	C D	92.5 a	99 a	74 ab	99 a	99 a	99 a	92 a	90 a
	TRIFLURALIN	0.5	lb ai/a	C D								
12	ANDERSON 10274	1	lb ai/a	E F	70.0 ab	99 a	16 bc	0 b	50 ab	99 a	67 ab	46 ab
7	ANDERSON 10274	1	lb ai/a	C D	64.8 ab	99 a	5 c	25 ab	50 ab	99 a	59 abc	50 ab
5	VALOR SX+	0.1875	lb ai/a	A B	96.8 a	99 a	99 a	99 a	99 a	87 a	96 a	99 a
	TRIFLURALIN	0.5	lb ai/a	A B								
11	ANDERSON 11167	1	lb ai/a	E F	80.0 ab	99 a	35 abc	25 ab	89 a	87 a	57 abc	67 ab
2	ANDERSON 10274	1	lb ai/a	A B	87.3 ab	99 a	74 ab	92 a	99 a	99 a	66 ab	25 ab
15	VALOR SX+	0.1875	lb ai/a	E F	89.8 ab	99 a	99 a	99 a	99 a	99 a	90 ab	96 a
	TRIFLURALIN	0.5	lb ai/a	E F								
4	ANDERSON 11065	1	lb ai/a	A B	63.8 ab	99 a	94 a	99 a	89 a	99 a	89 ab	99 a
1	ANDERSON 11167	1	lb ai/a	A B	94.5 a	99 a	42 abc	46 ab	99 a	50 a	89 ab	94 a
9	ANDERSON 11065	1	lb ai/a	C D	83.8 ab	99 a	99 a	99 a	98 a	87 a	85 ab	74 ab
14	ANDERSON 11065	1	lb ai/a	E F	82.5 ab	99 a	99 a	92 a	99 a	87 a	38 abc	50 ab
3	TRIFLURALIN	1	lb ai/a	A B	89.8 ab	99 a	91 a	40 ab	99 a	99 a	90 ab	93 a
8	TRIFLURALIN	1	lb ai/a	C D	51.3 ab	99 a	15 bc	25 ab	74 a	99 a	55 abc	50 ab
13	TRIFLURALIN	1	lb ai/a	E F	42.5 b	99 a	10 c	35 ab	99 a	74 a	74 ab	99 a

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
Pest Scientific Name				Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
Pest Name				F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				8/22/2011	8/22/2011	8/22/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011	9/5/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				56 53	56 53	56 53	70 67	70 67	70 67	70 67	70 67
Trt-Eval Interval				8WAT	8WAT	8WAT	10WAT	10WAT	10WAT	10WAT	10WAT
Number of Decimals					0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	25	26	27	28	29	30	31	32
6	ANDERSON 11167	1	lb ai/a	C D	85.0 ab	99 a	33 abc	50 ab	50 ab	74 a	19 bc	82 ab
LSD (P=.05)					28.25	0.0	39.7	43.1	41.0	35.9	41.6	52.1
Standard Deviation					19.77	0.0	27.8	30.2	28.7	25.1	29.1	36.4
CV					26.94	0.0	50.16	52.29	35.57	30.03	43.73	52.41
Bartlett's X2					54.567	0.0	17.008	9.145	21.046	5.582	39.322	28.602
P(Bartlett's X2)					0.001*	.	0.074	0.33	0.002*	0.472	0.001*	0.003*
Replicate F					1.857	0.000	1.120	2.685	0.799	1.783	0.579	0.439
Replicate Prob(F)					0.1504	1.0000	0.3511	0.0578	0.5009	0.1639	0.6315	0.7260
Treatment F					6.456	0.000	7.968	6.376	4.078	4.346	3.722	2.740
Treatment Prob(F)					0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0003	0.0046

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	33	34	35	36	37	38	39	40
Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code					PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
Pest Scientific Name					Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
Pest Name					F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
Crop Code					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name					NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated					WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date					8/22/2011	9/5/2011	9/5/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011
Rating Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%	%	%	%
Number of Subsamples					0	0	0	0	0	0	0	0
Days After First/Last Applic.					56 53	70 67	70 67	84 81	84 81	84 81	84 81	84 81
Trt-Eval Interval					10WAT	10WAT	10WAT	12WAT	12WAT	12WAT	12WAT	12WAT
Number of Decimals					0	0	0	0	0	0	0	0
16	UNTREATED CONTROL				0 e	0 b	0 b	0 c	0 b	0 b	0 c	0 b
10	VALOR SX+	0.1875	lb ai/a	C D	92 ab	99 a	99 a	99 a	99 a	99 a	86 ab	90 a
	TRIFLURALIN	0.5	lb ai/a	C D								
12	ANDERSON 10274	1	lb ai/a	E F	19 cde	0 b	0 b	23 bc	50 a	99 a	90 ab	96 a
7	ANDERSON 10274	1	lb ai/a	C D	39 a-e	99 a	99 a	25 bc	50 a	99 a	83 ab	70 a
5	VALOR SX+	0.1875	lb ai/a	A B	97 a	99 a	99 a	99 a	99 a	87 a	96 a	96 a
	TRIFLURALIN	0.5	lb ai/a	A B								
11	ANDERSON 11167	1	lb ai/a	E F	70 a-d	99 a	99 a	63 ab	87 a	99 a	65 ab	25 ab
2	ANDERSON 10274	1	lb ai/a	A B	65 a-d	74 a	89 a	89 a	99 a	99 a	77 ab	44 ab
15	VALOR SX+	0.1875	lb ai/a	E F	85 abc	99 a	99 a	99 a	99 a	99 a	85 ab	99 a
	TRIFLURALIN	0.5	lb ai/a	E F								
4	ANDERSON 11065	1	lb ai/a	A B	67 a-d	99 a	99 a	99 a	99 a	99 a	82 ab	88 a
1	ANDERSON 11167	1	lb ai/a	A B	88 abc	99 a	99 a	47 abc	99 a	99 a	76 ab	94 a
9	ANDERSON 11065	1	lb ai/a	C D	76 a-d	99 a	99 a	99 a	99 a	87 a	81 ab	84 a
14	ANDERSON 11065	1	lb ai/a	E F	45 a-e	99 a	99 a	87 a	99 a	99 a	25 c	82 a
3	TRIFLURALIN	1	lb ai/a	A B	90 ab	74 a	99 a	49 abc	99 a	99 a	91 ab	82 a
8	TRIFLURALIN	1	lb ai/a	C D	25 b-e	74 a	99 a	25 bc	74 a	99 a	92 ab	74 a
13	TRIFLURALIN	1	lb ai/a	E F	13 de	99 a	99 a	25 bc	99 a	99 a	82 ab	71 a

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code				PANDI	POLPY	POROL	AMACH	CHEAL	CIRAR	DIGSA	ECHCG
Pest Scientific Name				Panicum dichot>	Persicaria pen>	Portulaca oler>	Amaranthus hyb>	Chenopodium al>	Cirsium arvense	Digitaria sang>	Echinochloa cr>
Pest Name				F.panicum	P.smartweed	purslane	S.pigweed	lambsquarters	C. thistle	L.crabgrass	barnyardgrass
Crop Code				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Crop Name				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Part Rated				WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -	WEED -
Rating Date				8/22/2011	9/5/2011	9/5/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011	9/19/2011
Rating Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				0	0	0	0	0	0	0	0
Days After First/Last Applic.				56 53	70 67	70 67	84 81	84 81	84 81	84 81	84 81
Trt-Eval Interval				10WAT	10WAT	10WAT	12WAT	12WAT	12WAT	12WAT	12WAT
Number of Decimals				0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	33	34	35	36	37	38	39	40
6	ANDERSON 11167	1	lb ai/a	C D	59 a-e	99 a	99 a	75 ab	74 a	99 a	36 bc	91 a
LSD (P=.05)					41.2	30.4	7.0	39.2	39.9	12.5	32.6	44.0
Standard Deviation					28.8	21.3	4.9	27.4	27.9	8.8	22.8	30.8
CV					49.68	25.95	5.67	43.86	33.73	9.59	31.85	41.67
Bartlett's X2					38.072	0.0	0.0	10.35	2.154	0.0	38.739	33.088
P(Bartlett's X2)					0.001*	.	.	0.323	0.707	.	0.001*	0.002*
Replicate F					1.976	1.241	1.000	3.044	0.440	0.652	2.000	0.864
Replicate Prob(F)					0.1310	0.3062	0.4016	0.0384	0.7257	0.5858	0.1275	0.4667
Treatment F					4.658	9.902	190.747	6.489	4.057	31.805	5.732	3.305
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0010

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	41	42	43
	Pest Type				W Weed	W Weed	W Weed
	Pest Code				PANDI	POLPY	POROL
	Pest Scientific Name				Panicum dichot>	Persicaria pen>	Portulaca oler>
	Pest Name				F.panicum	P.smartweed	purslane
	Crop Code				NONE	NONE	NONE
	Crop Name				NONE	NONE	NONE
	Part Rated				WEED -	WEED -	WEED -
	Rating Date				9/19/2011	9/19/2011	9/19/2011
	Rating Type				CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%
	Number of Subsamples				0	0	0
	Days After First/Last Applic.				84 81	84 81	84 81
	Trt-Eval Interval				12WAT	12WAT	12WAT
	Number of Decimals				0	0	0
16	UNTREATED CONTROL				0 c	0 b	0 b
10	VALOR SX+	0.1875	lb ai/a	C D	88 ab	99 a	99 a
	TRIFLURALIN	0.5	lb ai/a	C D			
12	ANDERSON 10274	1	lb ai/a	E F	40 abc	50 a	74 a
7	ANDERSON 10274	1	lb ai/a	C D	48 abc	99 a	99 a
5	VALOR SX+	0.1875	lb ai/a	A B	96 a	99 a	99 a
	TRIFLURALIN	0.5	lb ai/a	A B			
11	ANDERSON 11167	1	lb ai/a	E F	18 bc	50 a	99 a
2	ANDERSON 10274	1	lb ai/a	A B	64 abc	99 a	99 a
15	VALOR SX+	0.1875	lb ai/a	E F	86 ab	99 a	99 a
	TRIFLURALIN	0.5	lb ai/a	E F			
4	ANDERSON 11065	1	lb ai/a	A B	58 abc	99 a	99 a
1	ANDERSON 11167	1	lb ai/a	A B	84 ab	99 a	99 a
9	ANDERSON 11065	1	lb ai/a	C D	69 abc	99 a	99 a
14	ANDERSON 11065	1	lb ai/a	E F	55 abc	99 a	99 a
3	TRIFLURALIN	1	lb ai/a	A B	89 ab	99 a	99 a
8	TRIFLURALIN	1	lb ai/a	C D	44 abc	74 a	99 a
13	TRIFLURALIN	1	lb ai/a	E F	30 abc	99 a	99 a

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011 Protocol ID:
Location: Wooster, Ohio Study Director: Doug Doohan and Tim Koch
Project ID: Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

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The Ohio State University

TRIFLURALIN ROW CROP EFFICACY

Trial ID: TRIFRCEFFICACYW 2011
Location: Wooster, Ohio
Project ID:

Protocol ID:
Study Director: Doug Doohan and Tim Koch
Investigator: Dr. Douglas J. Doohan
Sponsor Contact: Tim Birthisel

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
AMACH, Amaranthus hybridus, = US
CHEAL, Chenopodium album, = US
CIRAR, Cirsium arvense, = US
POLPY, Persicaria pensylvanica, = US
POROL, Portulaca oleracea, = US
DIGSA, Digitaria sanguinalis, = US
ECHCG, Echinochloa crus-galli, = US
PANDI, Panicum dichotomiflorum, = US
Rating Unit
% = percent

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

GENERAL TRIAL INFORMATION

Study Director: Doug Doohan and Erick Mvati **Title:** Professor, research sc
Affiliation: OARDC/The Ohio State University
Postal Code: 44691
Investigator: Dr. Douglas J. Doohan **Title:** Professor
Affiliation: OARDC
Postal Code: 44691

TRIAL LOCATION

City: Wooster **Trial Status:** ESTABLISHED
State/Prov.: Ohio
Postal Code: 44691 **Initiation Date:** 6/30/2011
Country: USA **Planned Completion Date:** 9/30/2011

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: Evaluate the efficacy of glyphosate in controlling nutsedge under timing application.
Herbicide injury to crops- however, this was not done.
Conclusions: All treatments were applied at 3-5 leaf stage for yellownutsedge(Cyperus esculentus);

Strategies were

1. To apply two or three different rates of each chemical under study
2. Rating the percentage control for each chemical at three weeks interval atfer spray and see the extent to which the herbicides killed or stunted the weed

All three chemicals; Roundup, Halosalfuron and Spartan 4F are statistically significant over the control

Roundup Wmax is stastically better 2WAT thru 6WAT at 2.5kg a.e/ha. Spartan 4F is significantly better at 6WAT.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name	
1.	CYPES	Ye	llow nutsedge	Cyperus esculentus

SITE AND DESIGN

Plot Width, Unit: 3 FT **Plot Length, Unit:** 15 FT **Reps:** 4
Site Type: FIELD
Tillage Type: NO-TILL **Study Design:** RACOBL

Trial Initiation Comments: The objective -To evaluate the efficacy of three herbicide on the control of yellow nutsedge.
- The rating was done at the interval of three weeks from spray.

SOIL DESCRIPTION

% Sand: 15 **% OM:** 3 **Texture:** SILT LOAM
% Silt: 70 **pH:** 6.9 **Soil Name:** Wooster Silt Loam
% Clay: 15 **CEC:** 8.4 **Fert. Level:** GOOD

Overall Moisture Conditions: NORMAL

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

APPLICATION DESCRIPTION

	A
Application Date:	6/30/2011
Time of Day:	9:00AM
Application Method:	SPRAY
Applic. Placement:	BRODIR
Air Temp., Unit:	69.2 F
% Relative Humidity:	68
Wind Velocity, Unit:	2.5 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	69 F
Soil Moisture:	ADEQUATE
% Cloud Cover:	0

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	CYPES

APPLICATION EQUIPMENT

	A
Operating Pressure:	40
Nozzle Type:	Turbtwin
Nozzle Size:	TTJ80-110
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	4
Band Width, Unit:	8
Boom Length, Unit:	8 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.4 MPH
Carrier:	Water
Spray Volume, Unit:	25 GGPA

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

Reps: 4 Appl Code: _ Plots: 3 by 15 feet
Spray vol: 25 gal/ac Mix size: 2 liters (min .39105)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Amt Product to Measure	Rep 1	2	3	4
1	untreated control							101	203	307	404
2	Roundup Weathermax	540	g ae/l	L	1.25	kg ae/ha	19.8 ml/mx	102	205	304	405
3	Roundup Weathermax	540	g ae/l	L	2.5	kg ae/ha	39.59 ml/mx	103	208	303	408
4	Halosulfuron Pro+NIS	750	g ai /kg	SP	0.06	kg ai/ha	0.6842 g/mx	104	201	308	407
5	Halosulfuron Pro+NIS	750	g ai /kg	SP	0.12	kg ai/ha	1.368 g/mx	105	202	305	402
6	Spartan 4F	480	g ai /L	F	205	g ai/ha	3.653 ml/mx	106	204	301	406
7	Spartan 4F	480	g ai /L	F	273	g ai/ha	4.864 ml/mx	107	206	302	401
8	Spartan 4F	480	g ai /L	F	410	g ai/ha	7.305 ml/mx	108	207	306	403

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
74.240	ml	Roundup Weathermax	540	L	
2.566	g	Halosulfuron Pro+NIS	750	SP	
19.778	ml	Spartan 4F	480	F	

* 'Per area' calculations based on spray volume= 25 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

Rep	Blk														
4	4	401	7	402	5	403	8	404	1	405	2	406	6	407	4	408	3
3	3	301	6	302	7	303	3	304	2	305	5	306	8	307	1	308	4
2	2	201	4	202	5	203	1	204	6	205	2	206	7	207	8	208	3
1	1	101	1	102	2	103	3	104	4	105	5	106	6	107	7	108	8

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Plot	CYPES WEED - CONTROL % 7/15/2011 2WAT 1	CYPES WEED - CONTROL % 7/29/2011 4WAT 2	CYPES WEED - CONTROL % 8/12/2011 6WAT 3
1	untreated control			101	0.0	0.0	0.0
				203	0.0	0.0	0.0
				307	0.0	0.0	0.0
				404	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Roundup Weathermax	1.25	kg ae/ha	102	50.0	55.0	60.0
				205	40.0	42.0	70.0
				304	35.0	35.0	50.0
				405	30.0	35.0	60.0
				Mean =	38.8	41.8	60.0
3	Roundup Weathermax	2.5	kg ae/ha	103	85.0	90.0	95.0
				208	85.0	90.0	95.0
				303	75.0	85.0	95.0
				408	75.0	80.0	90.0
				Mean =	80.0	86.3	93.8
4	Halosulfuron Pro+NIS	0.06	kg ai/ha	104	25.0	50.0	80.0
				201	40.0	45.0	95.0
				308	40.0	45.0	99.0
				407	30.0	70.0	95.0
				Mean =	33.8	52.5	92.3
5	Halosulfuron Pro+NIS	0.12	kg ai/ha	105	30.0	75.0	90.0
				202	45.0	50.0	70.0
				305	45.0	50.0	60.0
				402	25.0	60.0	99.0
				Mean =	36.3	58.8	79.8
6	Spartan 4F	205	g ai/ha	106	50.0	60.0	90.0
				204	55.0	60.0	87.0
				301	30.0	40.0	99.0
				406	65.0	75.0	99.0
				Mean =	50.0	58.8	93.8

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

Trt No.	Treatment Name	Rate	Rate Unit	Plot	CYPES WEED - CONTROL % 7/15/2011 2WAT 1	CYPES WEED - CONTROL % 7/29/2011 4WAT 2	CYPES WEED - CONTROL % 8/12/2011 6WAT 3
7	Spartan 4F	273	g ai/ha	107	60.0	65.0	90.0
				206	65.0	75.0	90.0
				302	35.0	45.0	99.0
				401	60.0	75.0	99.0
				Mean =	55.0	65.0	94.5
8	Spartan 4F	410	g ai/ha	108	65.0	75.0	90.0
				207	70.0	75.0	90.0
				306	70.0	75.0	95.0
				403	65.0	70.0	99.0
				Mean =	67.5	73.8	93.5

Weed Code
CYPES = Cyperus esculentus
Rating Unit
% = PERCENT

The Ohio State University

Yellow Nutsedge - Control with Glyphosate

Trial ID: Study Dir.:
Location: Investigator: Dr. Douglas J. Doohan

Weed Code			CYPES	CYPES	CYPES
Part Rated			WEED -	WEED -	WEED -
Rating Data Type			CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%
Rating Date			7/15/2011	7/29/2011	8/12/2011
Trt-Eval Interval			2WAT	4WAT	6WAT
Trt No.	Treatment Name	Rate Rate Unit	1	2	3
1	untreated control		0.0 e	0.0 e	0.0 c
2	Roundup Weathermax	1.25 kg ae/ha	38.8 d	41.8 d	60.0 b
3	Roundup Weathermax	2.5 kg ae/ha	80.0 a	86.3 a	93.8 a
4	Halosulfuron Pro+NIS	0.06 kg ai/ha	33.8 d	52.5 cd	92.3 a
5	Halosulfuron Pro+NIS	0.12 kg ai/ha	36.3 d	58.8 bcd	79.8 a
6	Spartan 4F	205 g ai/ha	50.0 cd	58.8 bcd	93.8 a
7	Spartan 4F	273 g ai/ha	55.0 bc	65.0 bc	94.5 a
8	Spartan 4F	410 g ai/ha	67.5 ab	73.8 ab	93.5 a
LSD (P=.05)			13.25	13.24	12.25
Standard Deviation			9.01	9.00	8.33
CV			19.95	16.49	10.96
Bartlett's X2			7.674	8.896	12.546
P(Bartlett's X2)			0.263	0.179	0.051
Replicate F			1.345	2.939	0.901
Replicate Prob(F)			0.2868	0.0568	0.4572
Treatment F			29.039	32.865	62.561
Treatment Prob(F)			0.0001	0.0001	0.0001

Weed Code
CYPES = Cyperus esculentus
Rating Unit
% = PERCENT

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.